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Central Lancashire New Town Proposal

IMPACT
ON
NORTH EAST LANCASHIRE

Ministry of Housing and Local Government

London Her Majesty's Stationery Office 1968

Mill premises lining the River Calder in Padiham

Foreword

This report, one of a long sequence of thoughts and plans, is our contribution to the body of knowledge which has been built up over the years in the search to find a better future for the North West. It thus seems to us much more than an enquiry into the possible effect on North East Lancashire of a new town development nearby. We would rather it were seen in perspective as the latest event in the history of a family of ideas concerning one of the most difficult problems which industrial man has to cope with. This is the problem of adjustment and response to the changes demanded by advancing technology as it is experienced by a fully developed country whose economy has hitherto been based on a technology which is now superseded. Britain faces this challenge sooner perhaps, and on a larger scale, than almost anywhere else in the world.

This is not a problem which is unique to areas like Central and North East Lancashire whose development was based on the cotton industry. Many other parts of Britain are now paying the price for the world supremacy in advanced technology which the country enjoyed a century ago at the zenith of the industrial revolution. The whole physical, social and economic structure of such areas was founded on iron, coal and steam. It has been left behind by the new world of electronics and petrochemicals. The old simple linkages based on canal, rail, post and ship are no longer relevant. The old styles of management and rigid modes of work organisation are slow to adapt to the pressures of new techniques and methods of communication. The system cannot compete as it stands with the new levels of productive efficiency and standards of living which other countries can now achieve. Industrially primitive a hundred years ago, they have now overtaken us.

The fact that growth occurred at an explosive pace over a short period of thirty to fifty years means that these problems of obsolescence are concentrated now in time as well as space, and this makes the heartbreak of adjustment, which Lancashire knows so well, all the more difficult to bear since the sheer physical problem of reconstruction seems so enormous. We hope that the studies we present in this report, added to what has already been done, may give some help to those whose job it is to deal with these problems not just in North East Lancashire but in the North West Region, and for that matter in other parts of the country too. We are encouraged in these hopes by the setting up of the Hunt Committee with the task of looking at areas like North East Lancashire which are not achieving the kind of economic growth necessary for national survival.

Positive large scale thinking about the physical and social reconstruction of the North West Region as it might affect Central and North East Lancashire was in evidence for the first time seventeen years ago when the County Planning Officer published 'The Preliminary Plan for Lancashire' in 1951. This proposed the settlement of over 70,000 people from the congested parts of Manchester, Wigan and Preston in areas around Leyland and Chorley and on the outskirts of Preston. The proposal was not acted upon, however, and in 1962 the Review of the County Development Plan again suggested the accommodation of immigrant population on a large scale in the area of Leyland and Chorley. At the same time the 'County Land Use Proposals for 1981 suggested a New Town or Town Development Schemes in this area.

The County Planning Officer took the idea further during 1964 in a Report which proposed that the existing population of about 250,000 in the Leyland-Chorley area should be increased to a total of about 400,000, and early in 1965 this received a generally favourable reaction from the authorities concerned. Soon after this the proposition for a large new town in Central Lancashire emerged in a new form as part of a Government policy statement on the housing problems of the North West Region, this time with the significant difference that, as well as providing for the long term overspill needs of Manchester, it should contribute to the industrial revival of the whole region and form a new focus for urban renewal. The aims of this strategic concept were first to create a centre of growth in Central Lancashire which would assist in relieving some of the pressures for development produced by rising population in the congested urban areas of the Liverpool-Manchester axis; secondly to establish a base for the accommodation of large modern manufacturing units for the growth industries which might otherwise set themselves up in the south;

thirdly to create the sort of attractive environment and high standard of living conditions which would constitute a bright new image for the North West.

The next event in the history of this idea took place early in 1966 when the Minister asked us, with a group of associated consultants, to test its feasibility and to make proposals for the area to be designated under the New Towns Act if it were decided to go ahead with the project. Our recommendations were published in May 1967 in 'Central Lancashire - Study for a City' (Her Majesty's Stationery Office) and are briefly described in Section 15 of this Report. In parallel with this commission the Department of Economic Affairs asked Economic Consultants Limited to do an 'Industrial Complex Study'. The object of this was to see what new industrial activities could be brought into the new town, if it went ahead, which would complement those already in the area and its surroundings, and produce a combination which would provide a faster rate of economic growth than might otherwise occur. The results of this work are expected later this year.

Before continuing with the established procedure for the creation of a new town - this would normally take the form of a draft designation order followed by a public enquiry - the Minister decided that it was important to evaluate the effects of the proposed development on the towns lying to the east. We were thus asked in July 1967 to investigate the impact of the proposed new town on North East Lancashire, and this is the origin of the study which is reported here. The detailed terms of reference and definition of the area to be studied are given in Section 1.

Our method of approach to the study was a simple one. First we tried to understand the present state of affairs in the subregion as fully as possible. We then projected from this a set of predictions which attempt to forecast changes in the situation to 1991 on the assumption that the new town development in Central Lancashire does not occur. This is summarised in Section 14. The next step was to construct a second projection assuming the growth of the new town to its planned size between 1971 and 1991. The difference between these two projections constitutes the impact of the new town on the subregion, summarised in Section 22. As might be expected the picture is a complicated mixture of good and bad effects, some long term, some immediate; some easy to quantify, some difficult, all subject to more or less wide variations over a time span of this extent.

There is no need here to discuss our findings. We hope the summary in Section 2 will serve as an adequate guide to them and to the body of the Report. It is perhaps worthwhile, however, to single out a view which we have come to hold very strongly as to the best way forward from this point. This is dealt with more fully in Section 23, the last in the Report, but the burden of it is simply that the choice, as many people have come to see it, between Central and North East Lancashire as the site for large scale development, is probably a false one. There is clearly an urgent need to put North East Lancashire in a competitive position in terms of the 20th Century so that the half million people who will continue to live there will be able to contribute their share of the national wealth, and increasingly to enjoy its fruits. There is an equal need to secure the future of Central Lancashire and the North West Region in relation to other parts of the country as a site for new economic growth on the largest and most efficient scale. What must be sought is a way of combining these two related endeavours to ensure the widest possible spread of benefit.

This is not an easy thing to do in a country which prides itself on the strength of its local democracy, and in an area where hard times endured have bred equally strong feelings of loyalty to the local community. In the course of the many meetings and talks we have had, and the answers we have had to our questionnaires, and the time we have spent in North East Lancashire in the past few months, we have found heartening evidence of the sort of vision that will be needed. There are many people who are anxious to find the best solution to the problems of the future and prepared to take account of new ideas.

It sounds like a truism to say once again how indebted we are to all those who have helped us with unstinting advice and information to produce this Report, but it is none the less true for being often said. In Central Government we would like to thank particularly our clients, the Ministry of Housing and to acknowledge with gratitude the support we have had from the Ministry of Transport, and also from the Department of Economic Affairs and the Board of Trade. Lancashire County Council and the County Boroughs of Blackburn and Burnley have responded nobly to our importunate requests for vital information, as have all the other twenty local authorities in the subregion - not to speak of the hundreds of industrialists, members of statutory authorities and private individuals who have patiently answered our questions. We hope all who have contributed to our study in these and other more subtle ways will feel that the work has taken us all further towards understanding how to meet the challenge of our future.

February, 1968

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PART 1

Introduction

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BLACKBURN FROM THE NORTH EAST

Aerofilms Ltd

Section One

Terms of reference

1.1 When the Central Lancashire New Town Designation Report was published in May 1967 the Minister of Housing and Local Government stated that a project of the size proposed would affect not only the people in the new city but also those outside it, and in particular those in the towns lying to the east. He therefore thought it essential that the wider impact of a development of such magnitude should be fully evaluated by the carrying out of a further study, which he hoped would be completed before the end of the year. The Minister also stated that the decision to proceed with a draft Designation Order for the new town should await the findings of the study. The results of this piece of work, which has come to be known as the 'Impact Study' are embodied in this report. The terms of reference which we were given are set out in the paragraphs 1.2 to 1.10 below.

Terms of reference

1.2 The report by Messrs. Robert Matthew, Johnson-Marshall and Partners and their associated consultants on the Central Lancashire New Town proposes the designation of some 51,000 acres for new town purposes. The area includes the towns of Preston, Leyland and Chorley. The present population of the area is about 250,000 and it is estimated that with the development of the new town the population will have doubled by 1991.

1.3 The intention of this proposal is that the new town development, in addition to providing for long term overspill needs, should contribute to the industrial revival of the whole region and form a new focus for urban renewal.

1.4 In this context it is important to evaluate the effects of the development on the surrounding areas, particularly the towns lying to the east. The Minister of Housing and Local Government has therefore decided to commission a special physical and economic planning study to investigate the impact of the proposed new town on nearby areas.

1.5 The study is accordingly to evaluate the effects of the development stage by stage of the new town on the North East Lancashire subregion of the North West Economic Planning Region. The study will concentrate on employment in industry and services; communication linkages, the provision of industrial sites; location of major urban uses; the shopping structure and town centre activities; to the degree appropriate to the various parts of the area studied. Projections of population structure and of travel-to-work patterns will be necessary. The study will be based on existing information without special survey except for a sample enquiry of industrial establishments.

1.6 In considering the problems of movement of industry to the proposed development the consultants should base their study on existing Government policies, i.e., that there are no special incentives proposed for the new town of the kind normally associated with development areas. They should note further that the Government have set up a Committee under the Chairmanship of Sir Joseph Hunt with the following terms of reference :- "To examine in relation to the economic welfare of the country as a whole and the needs of the Development Areas, the situation in other areas where the rate of economic growth gives cause (or may give cause) for concern, and to suggest whether revised policies to influence economic growth in such areas are desirable and, if so, what measures should be adopted."

1.7 In addition, the consultants should note that in a letter to local authorities of 16th May 1967 about loan sanctions to local authorities for expenditure on industrial development the Ministry said that regard would be had to the existence of special needs in particular places outside the development areas, including places where planned expansion or re-location is taking place.

1.8 The study must make the maximum use of work already done by the local authorities and the

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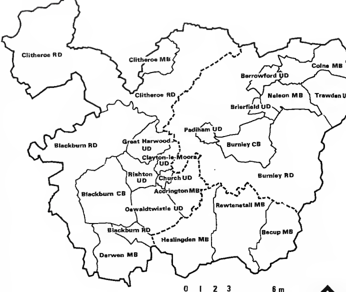
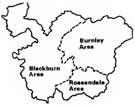


1.1 THE STUDY AREA



North West Regional Economic Planning Council. In the course of the study the consultants will need to consult those authorities and the other authorities in the area to obtain advantage of their knowledge and experience. The Ministry will invite the local planning authorities to take part in a technical liaison committee to facilitate this liaison.

1.9 The study is to begin on 27th July 1967 and the report is to be submitted to the Ministry by 31st December 1967.

1.10 The consultants will be free to make whatever use they may wish of all factual information which they collect in the course of the study subject, of course, to any restriction imposed by the body supplying the information. Subject to the same proviso the department, the Regional Economic Planning Council, the Lancashire County Council and any other councils (in relation to their interests) will have free access after the completion of the study to all such information and will be free to make whatever use they may wish of it.

The study area

1.11 The North East Lancashire Subregion defined in our terms of reference as the area covered by the study consists of 22 local authorities. These can be conveniently collected for the purpose of observation and analysis into three groups which we will call the Blackburn, Burnley and Rossendale Areas. The detailed breakdown of local authorities and 1966 populations is shown in Fig. 1.1 and Table 1.1 below.

1.12 The study area covers about 269 square miles and extends some 19 miles from the Pennine uplands in the east to the Central Lancashire Plain in the west, and some 16 miles from Pendle Hill and the Forest of Bowland in the north to the Rossendale Forest and Anglezarke Moor in the south. The total population in 1966 was 472,770 of which about 53% live in the Blackburn Area and just over 35% in the Burnley Area. The major towns are Blackburn and Burnley with 101,790 and 78,380 people respectively living within the Borough boundaries. Accrington, Nelson and Darwen represent the next order in the hierarchy with populations of 37,690, 30,980 and 29,000 respectively. Apart from Rawtenstall (22,950) all the remaining authorities have populations of less than 20,000.

TABLE 1.1 LOCAL AUTHORITIES IN THE STUDY AREA (The North East Lancashire Subregion)

	Blackburn Area	Population 1966	Burnley Area	Population 1966	Rossendale Area	Population 1966
County Boroughs	Blackburn	101,790	Burnley	78,380		
Municipal Boroughs	Accrington	37,690	Colne	18,990	Bacup	16,600
	Clitheroe	12,630	Nelson	30,980	Haslingden	14,200
	Darwen	29,000			Rawtenstall	22,950
Urban Districts	Church	5,870	Barrowford	4,670		
	Clayton-le-Moors	6,340	Brierfield	7,280		
	Great Harwood	10,640	Padiham	10,210		
	Oswaldtwistle	13,060	Trawden	1,860		
	Rishton	5,440				
Rural Districts	Blackburn	18,750	Burnley	15,860		
	Clitheroe	9,580				
Total Populations		250,790		168,230		53,750
					TOTAL :	472,770

Section Two

Summary of the report

Part Two - North East Lancashire: Content and Background

2.1 Following this introduction, Part Two of the Report is intended to establish the context and background of the study. We first examine briefly the setting of the study area - the geography, communications, population and employment situation in the North West Region (Section 3). We feel that an understanding of the historical development of North East Lancashire is an essential part of our study and this is outlined in Section 4. Section 5 completes Part Two with a description of the physical characteristics and climate of the subregion.

Part Three - North East Lancashire: Present and Future

2.2 Part Three deals with the present and future of the study area without the proposed new town in Central Lancashire. We start in Section 6 by describing patterns of land use and settlement, communications and accessibility, and other elements of the infrastructure. Section 7 deals with population and migration and Section 8 with manufacturing industry in terms of growing, static and declining industries. Present trends and future possibilities of employment in service industry are examined in Section 9 and the journey to work situation in Section 10. Section 11 brings all these aspects together to forecast possible future levels of population and employment over the period up to 1991 without the new town. We consider that there could be an increase in population from about 473,000 in 1966 to 500,000 at the most in 1991. Associated with this increase in population is an expected continued net emigration from the subregion of at least 30,000. Much of the population increase is likely to take place in the Blackburn Area, thus emphasising the present shift of the centre of gravity of the subregion towards the west. Employment in manufacturing industry is likely to fall from its present level of 131,000 to 115,000 in 1981 and to 112,000 by 1991. The reduction may be most severe in the Rossendale Area. When considering total employment however this decrease in the manufacturing sector should be set against a projected increase of over 17,000 jobs in the service sector by 1991.

2.3 Section 12 attempts to make a broad appreciation of present and future living conditions in the subregion.

Section Two

Summary of the report

The major aspects of housing, buildings for industry, social and commercial facilities and air pollution are covered. Section 13 looks in detail at present and future prospects for the town centres of the subregion in terms of retail trade, office work and other activities. The physical condition of the centres is examined and we conclude that, with the exception of Blackburn, redevelopment at present taking place or planned will be sufficient to meet most foreseeable needs. A summary of the whole of Part Three is provided in Section 14. This compares trends in renewal and rebuilding with the needs of the anticipated population and relates these to the likely future of the communications system and the amount and disposition of land available for development. It is clear that present programmes and resources do not match the considerable task of reconstruction which lies in the future.

Part Four - Central Lancashire

2.4 In Section 15 there is a brief description of the Central Lancashire New Town Designation Proposal. The possible phasing of growth between 1971 and 1991 is an important aspect of work on the Master Plan. We envisage the weight of new development in the 1970's being south of the Ribble and involving the expansion of existing towns like Leyland and Chorley. Development outside existing communities will take place mainly in the late 1970's and the 1980's to the north-east of Preston.

Part Five - Impact: The Effect of the New Town on North East Lancashire

2.5 This part of the Report considers the likely effects of the new town on the subregion. Sections 16 to 19 deal with the effects on migration, the labour market, service industry and town centres, and manufacturing industry respectively. The integration of these effects in Section 20 leads to the conclusion that additional population movement out of the subregion as a result of the new town may amount to between 10,000 and 15,000 people over the 20 years from 1971 to 1991. Section 21 assesses the impact of the new town in environmental terms by comparing the future development of the two areas and describing the action that may be needed in North East Lancashire to ensure the maximum benefit from the new town and to minimise adverse effects. Section 22 is intended as a summary of Part Five in which we conclude that on balance there is more evidence of potential gain for the subregion than loss. If the necessary changes in the physical environment in North East Lancashire can be initiated in the decade before the 1980's, there is every reason to believe that there will be a reduction in the numbers of people leaving the subregion for other parts of the country.

2.6 Section 23 finally looks at Central and North East Lancashire together as a possible development zone with a unified strategy for the future in physical and economic terms. This would imply a recognition of the fact that not all parts of the zone have equal potential for economic growth and a change in thinking about appropriate forms of assistance. We conclude that in this context the primary needs of North East Lancashire are for assistance with communications, rehabilitation and renewal, the reservation of land with industrial development potential, and industrial training facilities. If help in these respects could be appropriately synchronised with the development of the new town we conclude that greater economic and social benefits would follow for the subregion than those it could look forward to without the new town.

Appendices

2.7 The appendices to this report are intended to perform a triple function. First to act as a repository for information gathered which, while not essential to an understanding of our main argument, may be useful to others working in this field. Secondly to provide supporting evidence for some of our findings. Thirdly to describe our method of approach in dealing with specific subjects like migration which is a comparatively unexplored area of demographic studies, and also to the project as a whole which falls somewhat out of line with the normal run of planning work.

A Short Cut

2.8 In view of the length and complexity of the Report - our timetable was too short to allow much time for pruning without loss of value - it may be that some of our readers would be glad of a digest. For those in a hurry we suggest Sections 14, 22 and 23 in that order as an initial appreciation of the results of our work.

PART 2

North East Lancashire: context and background

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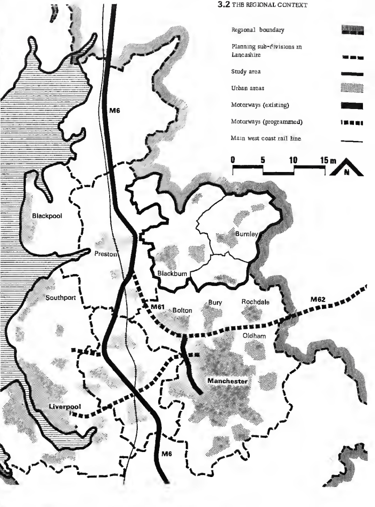
3.2 THE REGIONAL CONTEXT



Communications

3.4 The principal national lines of north/south communication cross the Central Lancashire Plain. The M6 Motorway, the national route between England and Scotland, forms the north/south axis of the regional highway network stretching 140 miles from Walsall in the south to Carnforth in the north. Construction of the M61 Manchester to Preston motorway and the first section of the motorway link between north Liverpool, M6 and M62 has begun (Fig. 3.3). The Stretford-Eccles By-Pass (M62) forming the western section of the Manchester outer ring road has been built. The continuation of M62 eastwards as the Lancashire-Yorkshire motorway has also begun. This motorway will form the main road-link across the Pennines between the North West Region and the Yorkshire-Humberside Region, where it will connect with M1 and A1(M).

3.5 A particular characteristic of the study area is its poor accessibility compared with Central and South Lancashire. The routes from the Central Lancashire Plain to areas east of Blackburn are narrow, tortuous and congested. The routes from Colne over the Pennines to the West Riding are narrow and traffic is slow-moving. The A59 Trunk Road carries traffic from Leeds, Bradford and Yorkshire to the West Coast. At holiday times and weekends there is serious congestion in Whalley and Clitheroe. The A56 Trunk Route connecting the study area with the Manchester conurbation is also at present steep, narrow and congested, although improvements are in progress and in preparation.

3.3 THE ROAD NETWORK IN LANCASHIRE AND THE WEST RIDING

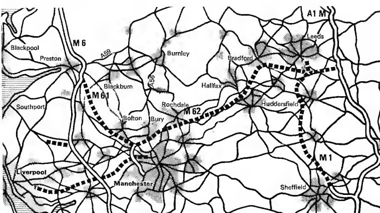
Scale. 10 miles equals 1 inch. (Approx).

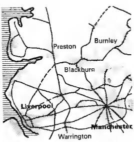
Motorways (existing) ═

Motorways (programmed) ▪▪▪

Trunk and main roads —

Urban areas ▨



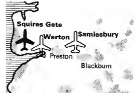


3.4 RAILWAYS IN THE NORTH WEST

Line considered for closure ----

3.6 The main West Coast railway line from London to Scotland passes north/south through the region via Crewe, Warrington, Preston and Lancaster (Fig. 3.4). This line is at present electrified from London to Manchester and Liverpool, and British Rail are studying the feasibility of extending electrification to Glasgow. The local railway system of the study area connects to the mainline system at Preston and Manchester. The siting of liner train depots near Preston and Warrington is being considered in addition to those at Manchester and Liverpool.

3.7 The two major airports serving the region are at Manchester (Ringway) and Liverpool (Speke) (Fig. 3.5). Ringway is the country's second major airport and deals with about 1.4 million passengers a year (compare Heathrow's 10.7 m. passengers a year). Traffic at Speke is 0.4 million passengers a year. Neither airport is expected to reach its maximum capacity before the 1980's. A survey of future airport needs has been commissioned by Lancashire County Council and the County Boroughs of Burnley, Blackburn, Blackpool and Preston. The consultants (Alan Stratford and Associates) have been asked to examine whether the demand for air travel in Central and North Lancashire would justify the improvement and extension of the existing airfields at Blackpool (Squires Gate), Warton and Samlesbury or whether a new airport is needed. The survey is to be completed by Spring 1968.



3.5 AIRPORTS IN THE NORTH WEST

Commercial airports ✈

Other airfields ✈

3.8 The region's two major ports at Liverpool and Manchester are of national importance. Liverpool is the second largest port in Britain and handles about 26 million tons a year, less than half the 59 m. tons passing annually through the Port of London. Manchester handles about 13½ m. tons a year. Of the smaller ports in the region Preston, Heysham and Barrow are the most important and together deal with about 12% of the region's overseas trade. Except for the Manchester Ship Canal the inland waterways in the region have only small commercial significance. The Leeds and Liverpool Canal extends through the area of study from Feniscowles to Foulridge. It is open for navigation but carries little commercial traffic. Its major importance for the future lies in its considerable potential for recreational use.

Population

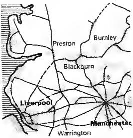
3.9 Some 5 million of the 6¾ million people of the North West Region are contained in the Liverpool and Manchester conurbations and in the inner strip of the Cotton Belt. The conurbations are still increasing in size and spreading their populations over a wide area, though at a reduced density. In recent years population growth has been particularly rapid in the southern suburban areas of the two conurbations. The North West Study estimated that 74,330 households from South East Lancashire and Merseyside should be accommodated by 1981 in Town Development Act schemes and in new towns including a contribution of 15,000 households from the proposed Central Lancashire New Town (Table 3.1)

3.10 The North West Economic Planning Council issued a first statement on a strategy for the region early in 1966. The Council considered that the population in the region may well increase by one million by 1981 if the net emigration assumed in the North West Study were to cease. However, even if outward migration were to continue at the 1956-64 rate, the Council's statement shows that it would still be necessary to accommodate an additional 800,000 more people in the region by 1981. Whether the figure is 800,000 or one million, the problems for land use planning are immense and the statement notes the Leyland-Chorley new town proposal in this context and, in addition, suggests two more areas of major growth in South Cheshire and North Lancashire, which might quickly be made attractive for industrial and office development.

3.11 The Council also point out that all existing areas in the region must make a contribution to the problem to the best of their resources, as it expects the three growth areas mentioned to provide for no

TABLE 3.1

OVERSPILL SCHEME	Number of households to be accommodated by 1981 from		
	S.E. Lancs.	Merseyside	Total
New Towns - Runcorn	-	11,000	11,000
Skelmersdale	-	14,000	14,000
Warrington	13,000	-	13,000
Central Lancs.	15,000	-	15,000
Town Development Act Schemes			
Westhoughton	12,300	-	12,300
Widnes	-	3,730	3,730
Winsford	-	500	500
Crewe Macclesfield	4,800	-	4,800
TOTAL	45,100	29,230	74,330



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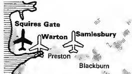
Line considered for closure ------

3.6 The main West Coast railway line from London to Scotland passes north/south through the region via Crewe, Warrington, Preston and Lancaster (Fig. 3.4). This line is at present electrified from London to Manchester and Liverpool, and British Rail are studying the feasibility of extending electrification to Glasgow. The local railway system of the study area connects to the mainline system at Preston and Manchester. The siting of liner train depots near Preston and Warrington is being considered in addition to those at Manchester and Liverpool.

3.7 The two major airports serving the region are at Manchester (Ringway) and Liverpool (Speke) (Fig. 3.5). Ringway is the country's second major airport and deals with about 1.4 million passengers a year (compare Heathrow's 10.7 m. passengers a year). Traffic at Speke is 0.4 million passengers a year. Neither airport is expected to reach its maximum capacity before the 1980's. A survey of future airport needs has been commissioned by Lancashire County Council and the County Boroughs of Burnley, Blackburn, Blackpool and Preston. The consultants (Alan Stratford and Associates) have been asked to examine whether the demand for air travel in Central and North Lancashire would justify the improvement and extension of the existing airfields at Blackpool (Squires Gate), Warton and Samlesbury or whether a new airport is needed. The survey is to be completed by Spring 1968.



3.5 AIRPORTS IN THE NORTH WEST

Commercial airports ✈

Other airfields ✈

3.8 The region's two major ports at Liverpool and Manchester are of national importance. Liverpool is the second largest port in Britain and handles about 26 million tons a year, less than half the 59 m. tons passing annually through the Port of London. Manchester handles about 13½ m. tons a year. Of the smaller ports in the region Preston, Heysham and Barrow are the most important and together deal with about 12% of the region's overseas trade. Except for the Manchester Ship Canal the inland waterways in the region have only small commercial significance. The Leeds and Liverpool Canal extends through the area of study from Feniscowles to Foulridge. It is open for navigation but carries little commercial traffic. Its major importance for the future lies in its considerable potential for recreational use.

Population

3.9 Some 5 million of the 6¾ million people of the North West Region are contained in the Liverpool and Manchester conurbations and in the inner strip of the Cotton Belt. The conurbations are still increasing in size and spreading their populations over a wide area, though at a reduced density. In recent years population growth has been particularly rapid in the southern suburban areas of the two conurbations. The North West Study estimated that 74,330 households from South East Lancashire and Merseyside should be accommodated by 1981 in Town Development Act schemes and in new towns including a contribution of 15,000 households from the proposed Central Lancashire New Town (Table 3.1)

3.10 The North West Economic Planning Council issued a first statement on a strategy for the region early in 1966. The Council considered that the population in the region may well increase by one million by 1981 if the net emigration assumed in the North West Study were to cease. However, even if outward migration were to continue at the 1956-64 rate, the Council's statement shows that it would still be necessary to accommodate an additional 800,000 more people in the region by 1981. Whether the figure is 800,000 or one million, the problems for land use planning are immense and the statement notes the Leyland-Chorley new town proposal in this context and, in addition, suggests two more areas of major growth in South Cheshire and North Lancashire, which might quickly be made attractive for industrial and office development.

3.11 The Council also point out that all existing areas in the region must make a contribution to the problem to the best of their resources, as it expects the three growth areas mentioned to provide for no

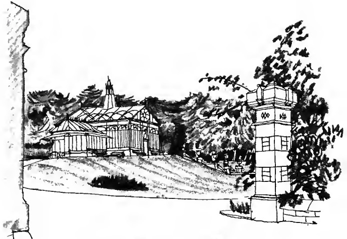
TABLE 3.1

OVERSPILL SCHEME		Number of households to be accommodated by 1981 from		
		S.E. Lancs.	Merseyside	Total
New Towns -	Runcorn	-	11,000	11,000
	Skelmersdale	-	14,000	14,000
	Warrington	13,000	-	13,000
	Central Lancs.	15,000	-	15,000
Town Development Act Schemes				
	Westhoughton	12,300	-	12,300
	Widnes	-	3,730	3,730
	Winsford	-	500	500
	Crewe Macclesfield	4,800	-	4,800
	TOTAL	45,100	29,230	74,330

more than a third of the likely increase in population. This points clearly to the vital role which the large scale renewal and expansion of existing towns must play in the accommodation of population growth in the region. The problems of a rising population are not, of course, shared equally by all parts of the region. Population decline has been taking place in the centre of the Manchester conurbation, in Furness and in East and North East Lancashire. The Council conclude their statement with the hope that the 15 years to 1981 will see substantial progress in removing what they regard as one of the chief causes of emigration - the unattractiveness of some of the towns in the North West Region.

Employment

3.12 In recent years the national rate of growth in employment has been higher in the service than the manufacturing industries. The North West Region is therefore at a disadvantage in having a large proportion of its employment in manufacturing, 46% in 1963 compared with a figure of 38% for Great Britain. While employment in manufacturing in Great Britain increased by over 7½% in the period 1953-63, in the North West it fell by 4%. Similarly, the rate of growth achieved in the construction and service industries was only two-thirds of that achieved at national level. The traditional industries on which the prosperity of the region has been based - coal mining, ship-building, textiles - have all declined. In the textile industry alone there was a loss of 140,000 jobs in the region between 1953 and 1963. Employment has recently increased most rapidly in the coastal areas of Lancaster/Morecambe, Southport/Ormskirk and The Fylde. There has also been rapid growth in Merseyside, a slight increase in the central and southern parts of the region, but little or no growth in Furness, a slight decline in the area north and east of Manchester, and a particular decline in the study area.



Corporation Park, Blackburn, one of several fine Victorian parks in North East Lancashire.

Section Four

Historical perspective

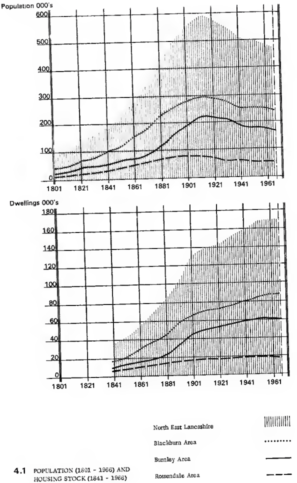
Early Settlement

4.1 The County of Lancashire as it is today was established by the end of the 12th Century. Throughout the Middle Ages it contained extensive game preserves - treeless 'forests' - and was sparsely populated. The Forest of Rossendale, for instance, covered an area of 80 square miles and until its disposal by the Crown was virtually uninhabited. Much of North East Lancashire - from Accrington to Colne, and from Rossendale to the Yorkshire border - was contained in the vast Parish of Whalley, established in the 7th Century. At the Reformation the county remained generally faithful to the old religion, gave support to the Royalists in the Civil War and was sympathetic to the Jacobite cause. Growing towns such as Manchester and Blackburn, however, supported Parliament, and it was in a few of the urban areas, such as these, that Nonconformism flourished and the commercial organisation of the scattered productive units of the early textile industry was nurtured.

The Textile Industry

4.2 In the later 16th Century coarse woollens were being exported from Lancashire, but the textile industry of the county was primitive and unorganised compared with that of Yorkshire, East Anglia or the West Country. About 1600, linen manufacture was being carried on mainly in the west of the county and woollen manufacture in the east. The areas overlapped around Blackburn. About the same time cotton first began to be used as weft with a linen woof to make the fustian known as Blackburn Check. The fustian trade developed at the expense of the old established woollen trade and its success was due to the accumulated experience of linen weaving, Nonconformist energy and the freedom of Lancashire from Mediaeval trade restrictions due to its late development compared with other textile-producing areas.

4.3 Later in the 17th Century statutory restrictions were imposed on cotton manufacture in order to protect the woollen trade. They were not lifted



4.1 POPULATION (1801 - 1966) AND HOUSING STOCK (1841 - 1966) until a hundred years later but their removal coincided with a sudden transformation, under the impact of industrialisation, of the previously unspectacular rate of growth. From 1770 to 1860 the average annual consumption of cotton wool in the United Kingdom increased over 200 times from 5 million to 1,100 million lbs. With mechanisation the advantages of factory organisation became apparent. Water-powered mills had to be sited on streams producing a considerable head of power and these were found mainly above 500 ft. This coincided happily with the needs of the process for a generally high natural humidity and ample water supplies for other purposes than power. By the end of the 18th Century, therefore, there were water-driven mills sited on fast-flowing streams in remote areas of Yorkshire, Derbyshire and Nottinghamshire as well as in Lancashire. In 1783, however, Arkwright successfully pioneered the use of a steam-engine in a cotton mill, and this development rapidly led to the massive growth of the industry in that part of Lancashire where coal was readily available.

Communications

4.4 Difficulties of overland transport were an important cause of Lancashire's relative slowness of development. John Wesley thought the roads around Rossendale were the worst he had ever travelled upon. The construction of turnpike roads was begun in the early 18th Century. Later a system of canals was constructed. By 1810 Preston was connected by water to Leeds via the Calder Valley, to Liverpool and to Lancaster.

4.5 As steam power was progressively introduced into the cotton industry in the early 19th Century, so the pattern of location of the mills changed. Early steam-engines were prodigal in their consumption of fuel and transport costs bulked very high in relation to the pithead price of coal. Even canal transport was not sufficiently cheap to enable mills to function economically at a distance from their source of fuel. Cotton manufacture, therefore, became concentrated on the coalfield which stretches down the Calder Valley from Colne to Blackburn and southwards past Wigan and Oldham in an area which also possessed the advantages of entrepreneurial initiative, an accumulated experience of textile production, abundant supplies of coal and water and a suitable climate.

4.6 By the time that a comprehensive railway system was being built up in the 1840's cotton manufacture had already assumed its final pattern of geographical distribution. It was heavily dependent upon Liverpool for the import of raw materials and the export of manufactured products. In the 1790's Liverpool overtook London as the chief importer of cotton and by 1835 it was handling nearly 90% of all British cotton imports.

The Growth of Settlements

4.7 The expanding cotton industry required a large labour force and there was a rapid upsurge of population in Lancashire. Between 1801 and 1851 the population was increasing at a minimum rate of 20% each decade. Until the 1890's, Lancashire's population grew faster than the average for England and Wales, rising from 7.51% of the total for England and Wales in 1801 to 13.5% in 1891, compared with 11.13% at the present day. Within Lancashire, the growth of the towns in the subregion followed the same pattern as the growth of the county within the nation. Growth in North East Lancashire was, in fact, faster than for the whole country up to the 1890's.

4.8 Cotton mills needing coal, water and good communications, were sited along the canals and rivers within easy reach of the coalfields and with the workers' cottages nearby. This naturally produced a linear form of town development extending up the Calder Valley and also along the Irwell Valley amid the Rossendale hills. Where the concentration of mills was greatest new and expanded urban agglomerations came into existence. The location of industry was also affected by land ownership. Many land-owners resisted the building of mills, as the Shuttleworth family of Gawthorpe did for many years in the adjoining town of Padiham. Rossendale, which had been 'disafforested' and settled early in the 16th Century, was an area of many small ownerships and development took place earlier there than in the upper Calder Valley. Major town expansions in the later 19th Century thus occurred at different periods in different parts of the subregion.

4.9 In the Blackburn Area, population growth continued almost without stopping until the 1890's. Population in and around Burnley rose sharply in the 1840's and again in the thirty years up to 1900. In the Rossendale Valley the most rapid increase took place in the twenty years after 1840. Yet, in all three areas, the impetus of growth was spent by the last decade of the 19th Century. The populations of the three areas reached their peaks just after this time (see Fig.4.1). The Rossendale Area reached its highest level of just over 72,000 in 1901, ten years before the peak levels in Blackburn and Burnley. House building closely followed population growth. The major periods of town expansion were thus in the Rossendale Area 1851-1881, in the Blackburn Area 1851-1901, and in the Burnley Area 1871-1911 (Figs. 4.2 and 4.3 over).

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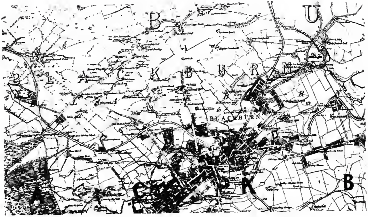
B
U
B L A C K B U R N
BLACKBURN
R
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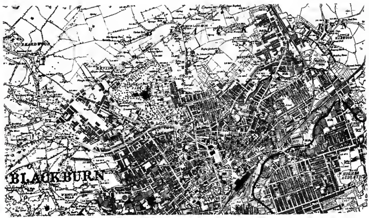

REVIDGE
LITTLE HARWOOD
BLACKBURN
HIGHER AUDLEY

The illustrations on the left are reductions from the 6" to 1 mile Ordnance Survey sheet. The upper and lower illustrations are the editions of 1848 and 1895 respectively and cover the same area of land.

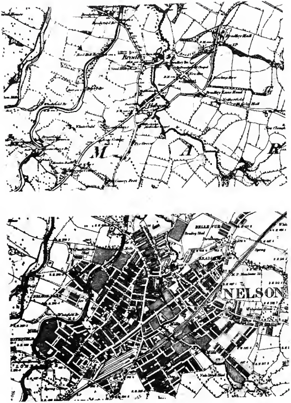
4.2 GROWTH OF BLACKBURN

Employment

4.10 As early as 1850 the cotton industry was acquiring 'an immobility born of maturity'. The size, concentration and degree of specialisation of the industry had reached a scale which ruled out any shift in location which might otherwise have occurred naturally in response to economic or technological change. Most of the available employment in North East Lancashire was in the textile industry - even in 1929 it accounted for two-thirds of total employment there. The population became predominantly urban and a high proportion of women were employed. Though the traditional local holidays called Wakes Weeks survived, the impact of urbanisation produced wide-ranging social, educational and recreational changes.

4.11 Although the cotton industry's need for labour raised wage rates, dependence on a single industry subject to cycles of boom and slump seriously affected the livelihood of the population. During the American Civil War, Lancashire experienced considerable hardship when supplies of raw cotton ceased. The creation of a large urban working-class changed the political complexion of the county. Industrial Lancashire in general supported Chartism, the Anti-Corn Law League and, in due course, Socialism. Popular expressions of radicalism were seen from the 1880's in the election of radical liberal members of the Rossendale, Accrington and Burnley constituencies. Clitheroe was won by Labour in 1902, and Philip Snowden was elected as Socialist MP for Blackburn in 1906. Opposition to the cotton masters, to low wages and to the iniquities of the truck system which obliged workers to buy the necessities of living at company shops, was expressed through the establishment of the Co-operative movement and the development of Trade Unions.

4.12 During the later 19th Century, the Calder Valley towns concentrated on cotton weaving, due in part to the introduction of power looms in the 1840's when the southern Lancashire cotton towns had already begun to specialise in spinning. There was also local specialisation - Blackburn, Darwen and Accrington produced shirtings and light cloths, Nelson and Colne produced cloths from dyed yarns and Rossendale produced heavy industrial cloths. There was little diversification of employment. Apart from coal-mining, quarrying and brick and paper making, most of the alternative manufacturing industries were linked to textiles, for instance, the production of footwear from felt in Rossendale, and textile machinery in Blackburn and Accrington. At the peak of its activity in 1911-12, the cotton industry employed directly no less than 70% of the total labour force.



4.3 THE GROWTH OF NELSON

The upper illustration shows the site of Nelson prior to 1848 and the lower illustration prior to 1895. Both cover the same area of land and development in the period. (Maps are reduced from 6" to 1 mile Ordnance Survey sheets).

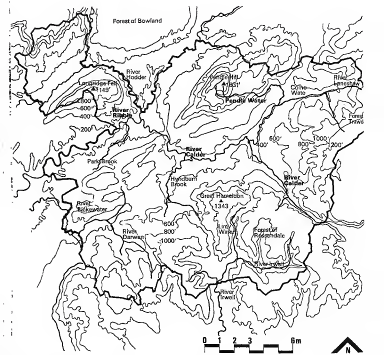
The Declining Years

4.13 After the Great War the cotton industry suffered the progressive loss of its traditional export markets. India and Brazil, formerly important customers, established indigenous industries and the Asian industry proved increasingly competitive in the reduced volume of world trade. Between 1929 and 1939 the total textile labour force in Lancashire declined by more than 25%. There were marked local contrasts in the rate of contraction because the reduction in employment was greater in weaving than in spinning and affected the finishing trades least. This meant that North East Lancashire was worse hit than the county as a whole. Textile employment in the study area fell by one-third. Blackburn, which produced coarse gray cloth for tropical markets, was seriously affected by Asian competition and lost two-thirds of its jobs although the Burnley Area, which produced finer cloths, was less affected. In 1931 unemployment in the weaving towns averaged 40% and many unemployed textile workers left the area. Although there were gains in employment in the service trades and in the clothing industry between 1929 and 1939, these failed to counterbalance the decline in textiles. During this period total employment in the Blackburn, Burnley and Rossendale Areas fell by some 16%, and their population by some 8.5%.

4.14 After 1945 the cotton industry showed a temporary recovery and in order not to further reduce the already depleted labour force little diversification of employment took place, see Paragraph 8.1. When the industry suffered a recession in 1952 there was therefore again considerable unemployment and emigration. The North East Lancashire Development Area was set up in 1953, but the resulting diversification of employment followed a period in which long continued emigration had produced a generally elderly work force, which was decreasing naturally through retirement and demands for labour could not always be met.

4.15 Specialisation in high-quality production did not provide the safeguard against closure that it had between the Wars - over the period 1954-60 the Calder Valley towns lost 47% of their employment in cotton but Rossendale lost only 17%. The Cotton Reorganisation Scheme at the end of the 1950's, which laid down levels of compensation for the scrapping of machinery and the closure of mills, attempted to put the industry on a better footing. One effect of reorganisation has been the breaking down of traditional divisions between spinning and weaving. The continuing integration of weaving with spinning in South Lancashire has led to a surplus of weavers in the study area. The introduction of multi-shift working which was necessary to make efficient use of machinery, was not welcome to a labour force in which in 1959 over half the operatives were women and 61% of the men and 53% of the women were aged over 40.

4.16 Over the centuries North East Lancashire has experienced a comparatively short, but extremely sharp, growth period. The standard of environment then created was low and there has been further deterioration due to a general decline in prosperity. There has been a loss of population due to migration even when jobs have been available, which has contributed to the problems the subregion is now facing. Even so, the subregion has responded in a remarkable way to the challenges presented by the aftermath of its explosive growth. New industries have been introduced to absorb the labour shed by the declining textile industry. The reduction of air pollution is being pursued energetically. New roads, housing and educational facilities have gone some way towards the replacement of worn out 19th Century stock, and central area redevelopment has gone ahead on a scale which would put to shame many less ill-favoured parts of the country. If the physical legacy of the historical processes we have been describing presents great problems for the future, the social and political legacies hold out considerable hope for their solution.


Forest of Bowland
River Hodder
Longridge Fell
1149'
800'
600'
400'
River Ribble
200'
Pendle Hill
1831'
Pendle Water
Colne Water
River Laneshaw
Forest Trawd
600'
400'
800'
1000'
1200'
River Calder
Park Brook
Hyndburn Brook
River Calder
Great Hameldon
1343
River Blakewater
River Darwen
600'
800'
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Limy Water
Forest of Rossendale
River Irwell
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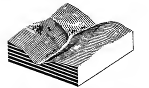
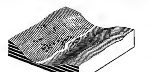
Section Five

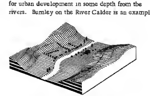
Physical character



The upper parts of the river valleys are narrow and steep-sided. Urban development is consequently limited to a narrow ribbon along the river. The Rossendale towns on the River Irwell are typical.



The intermediate sections of the valleys offer scope for urban development in some depth from the rivers. Burnley on the River Calder is an example



In the west of the study area the valleys are broad and shallow in profile. Clitheroe lies in this type of valley.

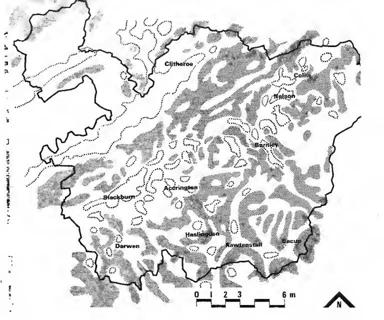
5.2 VALLEY SECTIONS
Each layer in the profile represents 300 ft. elevation.

Topography

5.1 The Study Area is divided by its river system into several clearly defined areas (Fig. 5.1) The broad valley of the Ribble, containing the town of Clitheroe, is dominated to the south by Pendle Hill which rises to a height of over 1,800 ft. Blackburn is situated upon the Rivers Darwen and Blakewater and is contained by the Billinge ridge to the north and by high moorland to the south. The Accrington group of towns are similarly contained by moorland to the south and situated on the Hyndburn Brook, a tributary of the Calder. The towns which stretch from Padiham through Burnley to Nelson and Colne are situated in the valleys of the River Calder and of the Colne and Pendle Water and contained by moorland to the south and Pendle Hill to the north. The high moorlands of the Forest of Rossendale rising to over 1,300 ft. are striated by the steep, narrow valleys of the upper reaches of the River Irwell on which are sited the towns of Haslingden, Rawtenstall and Bacup.

5.2 The topography of North East Lancashire can perhaps best be appreciated by comparing sections of different reaches of the river valleys (Fig. 5.2). Firstly, there are the broad, shallow valleys mainly below 300 ft. through which the River Ribble and the lower reaches of the Rivers Darwen, Hodder and Calder meander. Secondly, there are the narrower valleys of the middle reaches of the Rivers Hodder and Calder and of the Colne Water, at altitudes of between 300 and 600 ft. Finally, there are the steep narrow valleys of Pendle Water and of the upper reaches of the River Irwell in Rossendale, mainly above 600 ft.

5.3 The urban settlements of the study area are at considerably varying heights above sea level. While most of Blackburn, Clitheroe and Padiham are situated below 500 ft., the Rossendale towns are at heights of from 600 to 900 ft., and the new council housing estates at Bacup are above 1000 ft. Some 55% of the area lies above 600 ft. and some 21% above 1000 ft. Considerable areas contain gradients steeper than 1 in 10 while only limited areas,



5.3 SLOPE ANALYSIS

Slopes 1:25 and less ……

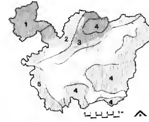
Slopes 1:10 and steeper ▨

predominantly around Blackburn and Accrington, are reasonably level with slopes of less than 1 in 25 (Fig 5.3) The broken nature of the terrain has contributed to the relative isolation of the towns in Rossendale and at the head of the Calder Valley.

Landscape

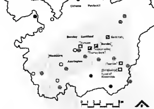
5.4 Even after 200 years of industrialisation North East Lancashire still contains extensive areas of great beauty and character. There is a wide variety of landscape, from river meadows to bare moorlands, from level plains to narrow, steep-sided valleys. Almost half the area of study has been designated by Lancashire County Council as being of High Landscape Value (Fig 5.4). Pendle Hill and the Forest of Bowland area were additionally designated in 1964 as places of Outstanding Natural Beauty.

5.5 The pasture and parkland area around the village of Chipping in the north-west corner of the subregion was originally settled in the Middle Ages and retains an historic pattern of small farms and winding lanes. It is situated to the west of the River Hodder, is drained by the River Loud and is enclosed by the foothills of Bowland and Longridge Fell (Area 1 on Fig. 5.4). The Ribble Valley (Area 2) is similar to the Chipping area in its parkland



5.4 LANDSCAPE

Areas of High Landscape Value	‖‖‖
Areas of Outstanding Natural Beauty	‖‖‖‖‖‖
Landscape sub-divisions	4



5.5 GEOLOGY & MINERALS

Sand/gravel	○
Clay/fireclay	⊕
Limestone	⊖
Stone	●
Collieries - Long life	◪
Medium life	◩
Short life	☐
Burnley Coalfield	‖‖‖‖‖‖

quality, although much grander in scale, and is dominated by Pendle Hill on the south, and Harrop Fell, outside the study area, on the north. The lower slopes of the hills have tree groups in the small tributary valleys of the Ribble, and copses among the hedges in the field pattern.

5.6 The slopes of Pendle Hill (Area 3) have a parkland and pastoral character similar to that of the previous areas. There are belts of trees up to about 600 ft. and above that isolated groups of conifers. The main difference between this and the previous areas is in topography rather than landscape. The minor valleys near Sabden and Barley subdivide the lower slopes of Pendle, and there are small pockets of extremely pleasant and unspoilt land. Area 4 comprises the uplands - the top of Pendle Hill, the Forest of Trawden, Worsthorne Moor, the Forest of Rossendale and Oswaldtwistle Moor. This land is all above 600 ft. and much is over 1,000 ft. The hills are generally similar in height and provide a constant background of long, uniform profiles viewed from the valley bottoms. Apart from isolated clumps of conifers and tree-clusters in the more sheltered valleys it is an area of rough grass, heath and whins. The scars of old mining and quarrying activities are prominent and the major economic activity is grazing. Area 5 consists of land between the Darwen Valley and Anglezarke Moor. It is similar in character to the lower slopes of Pendle Hill but is more extensively wooded. It is the eastern part of a landscape pattern which stretches westwards from Hoghton along the northern foot of Anglezarke. The northern part of this area forms a landscape buffer between Preston and Blackburn and is particularly fine around Hoghton Bottoms

5.7 The remainder of the study area is dominated by urban development. The landscape here has many isolated features of good quality although the combined effect of intensive 19th Century urban development with the collieries and tips around Burnley, and the electricity generating stations at Blackburn, Huncoat and Padiham is bleak and discouraging.

Geology & Minerals

5.8 Pendle Hill and the Rossendale moors are composed of hard millstone grit and soft shale in bands (Fig.5.5). The uplands are grit outcrops, characterised by broad plateaux and sudden scarps. Exposed shale has been worn away to form the river valleys which contain glacial sand and gravel.

5.9 There are extensive coal seams beneath the shale, stretching in irregular deposits from Burnley in the north-east to beyond Wigan and Oldham in the south (Fig.5.5). In 1951 the Burnley Coalfield had 16 small or medium-sized collieries operating in both underground and opencast extraction. The seams are generally thin but have been extensively worked although the coal had a high sulphur content. By 1966 the number of collieries in operation had been reduced to 6.

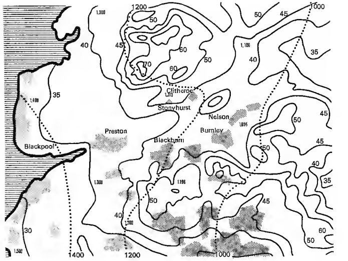
5.10 The uplands of the Ribble Valley are composed of limestone which is extensively quarried near Clitheroe for cement-making and roadstone. There is no major extraction of sand or gravel in our study area although there are considerable deposits in the Ribble Valley below the confluence of the Rivers Hodder and Calder. Shale, mudstone and fireclay occur in the Darwen, Blackburn and Accrington areas, and are extracted for the manufacture of engineering and refractory bricks and sanitary ware. Sandstone and millstone grit were formerly quarried for building in Rossendale and the Burnley Area.

Agriculture

5.11 The average value of the agricultural land in the study area is poor and suitable only for grazing, as might be expected where over half the total area is above 600 ft. All the land in agricultural use south-east of a line from Mellor through Wilpshire, Whalley and Pendleton to Downham and also around Longridge Fell and Harrop Fell is classified as Grade IV or V in the National Land Classification system employed by the Ministry of Agriculture. Within these areas land at lower levels is predominantly Grade IV ("with severe agricultural limitations") while moorland, land over 1,000 ft. and on steep slopes is predominantly Grade V ("of little agricultural value"). There is a small area of good fertile land (Grade II) beside the River Ribble near Balderstone. Land of average agricultural quality (Grade III) extends from Hoghton Bottoms, west of Blackburn, up the River Ribble from Balderstone to beyond Chatburn, and in the vale of the River Loud north of Longridge Fell.

Climate

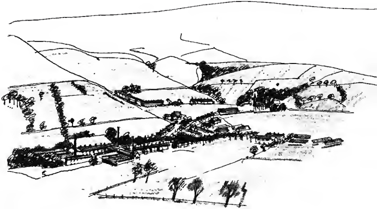
5.12 Available statistics indicate that the poor reputation of the climate of North East Lancashire is only partially deserved and that wide variations in



rainfall, sunshine and fog occur within the study area. A deep re-entrant, for instance, in the north-west of the study area, brings the lower rainfall and higher sunshine hours of the Preston Area some way up the Ribble Valley. In general, however, the climate of the subregion gradually deteriorates from west to east so that there is less sunshine, more rain, snow and fog, rather more frost and slightly lower average summer temperatures than in Preston. Average rainfall varies from over 60 inches per annum on Pendle Hill to over 50 inches in Darwen and the Rossendale towns, and from 39 inches to 45 inches in the remaining towns of the study area (compared with 35 inches in Preston and the national average of 34 inches). July temperatures average 59.4 F in the study area compared with 60.5 F in Preston. Winter temperatures are on average only slightly lower than in Preston or South East England. Throughout the year Burnley has significantly fewer hours of bright sunshine than Darwen which has fewer than Stonyhurst. Most of the study area lies between the 1,000 and 1,200 hour lines of annual sunshine - between 8% and 15% less than the 1,300 hours enjoyed by the Preston area (Fig. 5.6). Prevailing winds are moderate varying from south-west to north-west. Stonyhurst and Nelson also receive a significant proportion of north-east winds, perhaps due to the effect of the mass of Pendle Hill in the valley structure. Snowfall is more frequent and longer-lying than the national average, or than in Preston Area, and it increases at higher levels. Frost pockets in the deeper valleys are a feature of the area - there is frost on 92 days per annum at Nelson compared with 51 days at Preston. Fog occurs on an average of 34.5 days per annum at Nelson, slightly more than Preston but considerably fewer than Rochdale or Manchester. Sunshine, fog, precipitation and humidity are all affected by air pollution which occurs on a considerable scale, particularly in winter. Although pollution has been lessened by action under the Clean Air Act it still seriously affects both health and climate and is discussed at greater length in Section 12.

5.6 CLIMATE

Annual rainfall (inches)	———
Annual sunshine (hours)	....



Sabden from Padiham Heights

PART 3

North East Lancashire: present and future

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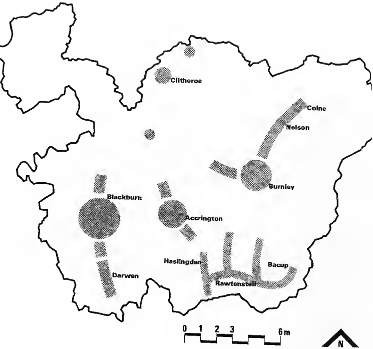

Clitheroe
Colne
Nelson
Burnley
Blackburn
Accrington
Haslingden
Bacup
Rawtenstall
Darwen
0 1 2 3 6m
N

Section Six

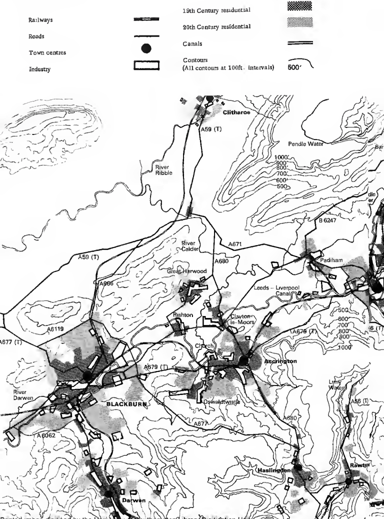
Urban structure, transportation and infrastructure

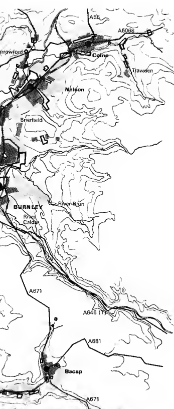
Urban Grouping

6.1 There are five distinct groups of towns in North East Lancashire (Fig. 6.1). Three of these groups, centred on Blackburn, Accrington and Burnley, make up the central urban spine extending across the middle of the subregion from west to east. Their populations are approximately 150,000, 80,000 and 167,000 respectively. The fourth is the smaller Rossendale group (54,000) to the south. The fifth group centred on Clitheroe is smaller still with a population of 22,000 - very much a northern outlier. The populations of the local authorities making up these groups are given in Table 1.1 of Section 1.

6.2 Urban form is strongly influenced by the valley sections. The narrow linear form of the Colne-Nelson-Brierfield sequence broadens out on the lower ground in the Burnley Area. Six miles to the south-west are Accrington and Blackburn with their associated settlements in a more complex and scattered grouping. The Rossendale towns - Haslingden, Rawtenstall and Bacup - are seven miles south-east of Blackburn, six miles south of Burnley and separated from them by a high moorland watershed. They are on the headwaters of the River Irwell which flows southwards towards Bury (8 miles) and Manchester (17 miles). Clitheroe is set in low-lying farmland 8 miles north of Accrington, distinct and different in situation and character from the other towns in the study area. Since nearly 85% of the people in North East Lancashire live in the three groups of towns making up the central spine it is here that the impact of the proposed new town will be most significant, and this is obviously where the greatest emphasis of this study must be placed. This is not to deny that the Rossendale towns also possess acute problems, but as far as the present study is concerned it will only be possible to draw limited conclusions about their future, since they lie to some extent more within the influence of the Manchester conurbation which is, of course, outside our study area. Clitheroe in its prosperous rural hinterland is even more detached from the Calder Valley situation and, having less than 5% of the total population, will occupy a relatively minor place in our findings.

6.2 URBAN STRUCTURE





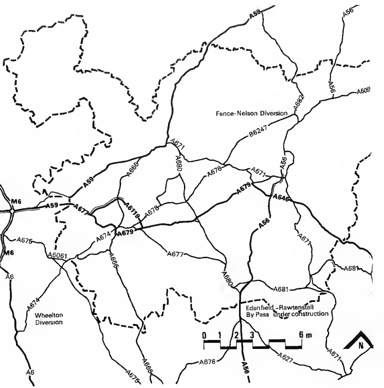
Land Use Distribution

6 3 All the urban areas tend to show a similar pattern of land use distribution (Fig 6.2). The present town centres of Blackburn, Accrington and Burnley correspond approximately to the original extent of the towns before industrialisation. Close by the centres, and often extending from one end of the town to the other, are the 19th Century mills and factories clinging to the flat sites and watercourses which run along the valley bottoms. The 19th Century residential estates were laid out to a grid pattern, like rows of machines in a factory, on the undeveloped land adjoining the mills and in many cases had to contend with the problems of steep or unsuitable sites. Thus on confined sites building took place in small units often inconveniently related to adjoining development and expedients such as back to earth housing were adopted. The towns are segmented by the systems of road, rail and canal communications which also developed along the most level routes on the valley floor. More recent residential building has taken place on the outskirts of towns, often on steep sites. Thus the typical North East Lancashire town form emerges with industry at the centre mingling with, and surrounded by, a massive core of dense terrace housing with later development on the periphery - the whole interlaced, particularly in the centre, with a tangle of old roads, railways, rivers and canals.

Roads

6.4 There are no motorways in the study area. The only connection at present between North East Lancashire and the regional motorway network is the A59 trunk road which joins M6 at the Samlesbury interchange. The 44 miles of trunk road within the study area are made up of the A59 from Preston east through Whalley and Clitheroe towards Skipton and the West Riding, the A56 from Burnley south through Rawtenstall to Bury and Manchester and the A677 (or A6119) - A679 - A646 route from Preston which passes eastwards through Blackburn, Accrington and Burnley on the way to Halifax (Fig. 6.3).

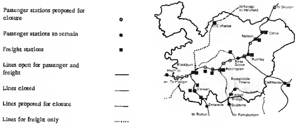
6.5 Other roads connecting North East Lancashire and the region, and shown in Fig. 6.3 are the A674 - A6061 - A675 route from Blackburn to Preston, A674 from Blackburn to Chorley, A671 from Bacup to Rochdale, A666 from Darwen to Bolton, A56 from Burnley through Nelson and Colne towards Skipton, A682 from Barrowford to Gisburn and A6068 from Colne to Keighley. There are 100 miles of Class 1 roads of which only about three miles (A679 Burnley inner ring road, A56 Manchester road, Burnley, and



6.3 ROADS

Major roads, dual two lane	═	Trunk roads, dual two lane	═
Other major roads	—	Other trunk roads	━
Study area boundary	- - -	Motorway	═

6.4 RAILWAYS - STUDY AREA



A6119 Blackburn ring road) are of dual two-lane carriageway standard. The first stage of major improvements to B6247 is now complete and provides an alternative route from the Barrowford-Padiham area to the A59 via A671. Although B6247 is now of two-lane standard it has been designed for ultimate widening to three lanes. The Edenfield-Rawtenstall Level Crossing By-pass, A56, and the Bank Street Internal Relief Road, Rawtenstall, A56 are now under construction to dual two-lane standard.

Railways

6.6 The railway system of the study area (Fig. 6.4) connects to the mainline network at Preston (for services northwards to Carlisle and Glasgow, southwards to Liverpool, Manchester and London) at Skipton (for services northwards to Carlisle and eastwards to Leeds) and at Manchester (for services to the Midlands, London and the South). There are local stopping services, most frequent at the peak hours, from the Blackburn-Colne line to Bolton, Manchester, Preston and Blackpool, and from Rawtenstall to Bury, for Manchester (Fig. 6.5). Trains from Manchester to the West Riding stop at Todmorden, which is accessible by road from the Burnley area and Rossendale. The only through trains from the study area are to Blackpool, Skipton, Bradford and Leeds. Freight traffic is carried on the Blackburn-Hellifield line as well as on the passenger lines.

Bus Transport

6.7 The major bus operators in the study area are Ribble Motor Services, Accrington Corporation Transport, Blackburn Corporation Transport, Burnley, Colne and Nelson Joint Transport, Darwen Corporation Transport, Haslingden Corporation Transport and Rawtenstall Corporation Motors (Fig. 6.6). There are regular coach services at approximately hourly frequencies on the routes Burnley-Blackburn-Preston-Blackpool, Blackburn-Bolton-Manchester, Clitheroe-Accrington-Manchester and Skipton-Burnley-Rawtenstall-Bury-Manchester. There are frequent inter-urban bus services (Fig. 6.7), but journey times are generally poor. Inner suburban areas have generally adequate services since the predominantly linear pattern of development is well suited to bus operation. Outer suburban areas and rural areas are less well served.

Air Transport

6.8 Samlesbury is the only airfield within the study area and it is at present used by the British Aircraft Corporation for testing purposes. A survey into the future needs of Central and North Lancashire is at present being carried out (see Para. 3.7).

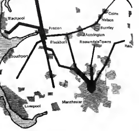
Waterways

6.9 Preston is the nearest port to the study area. It handles mainly goods traffic, much of it for Ireland, and although the docks are limited in size, the quantity of goods passing through has recently been increasing at a rate of 7% per annum. In 1965, 40% of its traffic was in containers for which the growth rate has been 10% per annum. The docks are accessible by both road and rail from the study area. As previously mentioned (Para. 3.8) the Leeds and Liverpool Canal is no longer of commercial significance.

Accessibility

6.10 At a local level the narrow, winding and hilly roads and the extent of the urban areas through which most routes pass lengthen journey times and cause traffic congestion. The A59 does not serve the urban areas east of Blackburn (except via the A671 through Whalley). The "southern trunk route" - A677 (A6119) - A679 - A646 - passes through the congested centre of Accrington, has a choice between the centre of Blackburn and a detour around the outskirts making use of part of the outer ring road and is diverted around the southern suburbs of Burnley. The trunk route southwards to Manchester and the alternative routes - A666 from Darwen, A680 from Accrington, A671 from Bacup - pass over high ground with steep gradients and about half the distance to Manchester is through densely built-up areas.

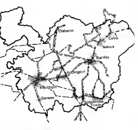
6.11 Access to the national road system is similarly



6.5 PASSENGER TRAIN FLOW

Trains per day in single direction

30
60
100



6.6 BUS SERVICES BY OPERATORS

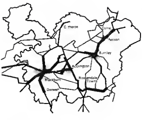
Ribble Motor Services

Accrington Corporation Transport

Blackburn Corporation Transport

Burnley, Colne & Nelson Joint Transport

Haslingden Corporation Transport
Rawtenstall Corporation Transport



6.7 BUS TRAFFIC FLOW

Inter-urban bus flows, per hour in one direction during a working day.

2 or less
3 - 4
5 - 6
7 or more

poor. The whole study area is dependent upon A59 from Samlesbury westwards to the M6 intersection at the Ribble crossing. A59 is, in addition, congested by through traffic at weekends and by a substantial amount of industrial traffic from North East England to western and southern Lancashire, although this may be considerably reduced when the Trans-Pennine Motorway is completed. Table 6.1 indicates the average time taken to reach M6 from the urban areas of North East Lancashire. These figures reflect the traffic speeds recorded by Ministry of Transport surveys in 1961, adjusted to take account of increases in traffic volume of up to 25%. Experience of peak hour travel, however, suggests that the journey times given in Table 6.1 can be as much as doubled particularly on A677-A679 west of Burnley.

6.12 Almost all the major industrial concentrations in North East Lancashire employing more than 500 workers are situated within ten minutes' walking distance of a bus service with a frequency of not less than 15 minutes. In addition some of the larger firms provide works bus services. The average speeds and journey times of the main inter-urban bus services are shown in Table 6.2. No allowance has been made in the speeds for the waiting time which is often necessary when a change has to be made, which adds materially to the time and trouble involved. Average speeds by rail are greater than those by bus or coach, as shown in Table 6.3, but trains are much less frequent than buses.

TABLE 6.1 CONNECTIONS TO M6

Town	Miles (approx)	Type of route	Main urban areas passed through	Journey times* (off peak)
COLNE	22.5	Trunk & classified	Nelson, Clayton-le-Moors, Rishton, Accrington	55
BURNLEY	18.5	Trunk		43
ACCRINGTON	13	Trunk		26½
BLACKBURN	7.5	Trunk		17
HASLINGDEN	16.5	Trunk & classified		32
BACUP	21	Trunk & classified	Rawtenstall, Haslingden	59
CLITHEROE	17.5	Trunk	Whalley	34

* assuming an average speed of 15 m.p.h. on roads in built-up areas and 35 m.p.h. on other roads.

TABLE 6.2 SPEEDS AND FREQUENCIES OF BUS AND COACH

* Change necessary
All figures relate to stage services except those marked (a)
Upper figures show speeds in mph
Lower figures show frequencies in minutes

	ACCRINGTON	BLACKBURN	BURNLEY	CLITHEROE	COLNE	DARWEN	MANCHESTER	PRESTON
BLACKBURN	93 12							
BURNLEY	14 30	13 30						
CLITHEROE	12 30	15 20	15 60					
COLNE	12 30*	11 30	9 10	12 30*				
DARWEN	11 12*	B 10	12 20*	12 20*	11 30*			
MANCHESTER	18 30(a)	19 60(a)	21 60(a)	21 60(a)	22 60(a)	21 60(a)		
PRESTON	14 12*	15 10	15 20	14 60	1B 60(a)	12 20*	21 30(a)	
RAWTENSTALL	12 12	13 12*	14 20	12 30*	11 20*	11 12*	22 30*	11 12*

TABLE 6.3 AVERAGE SPEEDS OF PUBLIC TRANSPORT SERVICES FROM BLACKBURN

Speeds in mph	Bus	Coach	Rail	Express Rail
To Accrington	13	-	33	-
Blackpool	-	21	26	40
Burnley	13	20	22	35
Colne	11	20	32	45
Manchester	-	19	26	29
Preston	15	19	25	37

Private Car Ownership

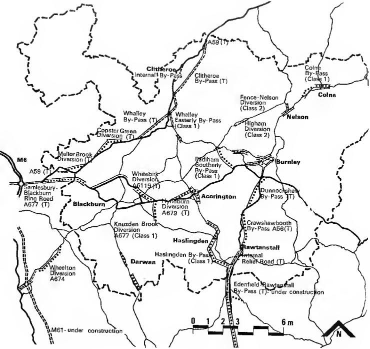
6.13 In 1964 the Lancashire County Council carried out a Motor Vehicle Survey (excluding County Boroughs) which showed that the study area, without Blackburn and Burnley, possessed more and smaller households and fewer and slightly older motor vehicles than the Administrative County as a whole. The same survey showed that over the years 1954-62 vehicle and car ownership had been increasing at a higher rate than the average for Great Britain in the Administrative County, but at a lower rate in Lancashire County Boroughs. Overall ownership has, however, remained considerably less than the average for Great Britain, and since 1962 the rate of increase in the Administrative County has fallen below the national average. In the study area, on the other hand, the rate of growth has been approximately the same as the national average.

6.14 Car ownership per head is at present slightly higher in the study area (including the two County Boroughs) than the average for the Geographical County of Lancashire which is, however, appreciably lower than the average figure for England and Wales (Table 6.4). Car ownership is higher in the Blackburn Area than in Burnley, and is lowest in Rossendale. The Blackburn and Burnley Areas show the same pattern of lower car ownership in the larger, compact urban areas and higher car ownership in the Urban and Rural Districts where public transport services are less good and property values are generally higher. In the Rossendale Area car ownership is the same as in the Blackburn or Burnley County Boroughs but almost the whole population is within walking distance of main roads and public transport. In the

TABLE 6.4 CAR OWNERSHIP

	Total Housing Stock	Garages	Lock-ups	Total Garages & Lock-ups	% Provision of Car Spaces	Total Cars	% of Cars Per Household	Cars Per Head
Blackburn C.B.	37,217	8,078	5,100	13,178	35	13,170	34	.13
Accrington M.B.	13,997	2,472	1,649	4,121	29	4,520	32	.12
Church U.D.	2,037	480	296	776	39	680	34	.12
Clayton-le-Moors U.D.	2,318	168	437	605	26	800	35	.13
Clitheroe M.B.	4,561	625	556	1,181	26	2,180	48	.17
Darwen M.B.	10,689	839	1,818	2,657	25	3,650	33	.13
Great Harwood U.D.	3,950	700	508	1,208	31	1,600	41	.15
Oswaldtwistle U.D.	4,982	865	710	1,575	32	2,190	44	.17
Rishton U.D.	2,084	400*	285	685	33	620	30	.11
Blackburn R.D.	5,637	3,049	419	3,468	65	4,050	76	.24
Clitheroe R.D.	2,241	645	212	857	45	1,620	83	.17
Sub-Total Blackburn Area	89,713	18,321	11,990	30,311	34	35,080	39	.14
Burnley C.B.	27,420	2,236	4,159	6,395	33	8,760	32	.11
Barrowford U.D.	1,984	445	333	778	39	1,010	52	.20
Brierfield U.D.	2,711	254	603	857	32	1,010	37	.14
Colne M.B.	7,382	1,000	1,454	2,454	33	2,780	38	.15
Nelson M.B.	12,060	475	2,330	2,805	23	4,330	36	.14
Padiham U.D.	3,659	476	619	1,095	29	1,270	35	.13
Trawden U.D.	783	35	187	222	32	360	50	.19
Burnley R.D.	6,570	1,574	1,202	2,776	46	3,680	61	.23
Sub-Total Burnley Area	62,569	6,495	10,887	17,382	28	23,200	37	.14
Bacup M.B.	6,174	790	1,082	1,872	31	1,830	30	.11
Haslingden M.B.	5,362	1,000	1,001	2,001	36	1,840	35	.13
Rawtenstall M.B.	8,622	351	1,080	1,431	16	2,820	33	.12
Sub-Total Rossendale	20,158	2,141	3,163	5,304	27	6,490	32	.12
GRAND TOTAL N.E. LANCASHIRE	172,440	26,957	26,040	52,997	31	64,770	38	.14
Geographical County of Lancashire	1,671,462					658,440		.13
England and Wales	15,376,216					7,991,860		.17

* Estimated


A59 (T)
Clitheroe
Internal By-Pass
Clitheroe By-Pass (T)
Colne By-Pass (Class 1)
Colne
Fence-Nelson Diversion (Class 2)
Nelson
Higham Diversion (Class 2)
Whalley By-Pass (T)
Whalley Easterly By-Pass (Class 1)
Copster Green Diversion (T)
Mellor Brook Diversion (T)
M6
A59 (T)
Padiham Southerly By-Pass (Class 1)
Burnley
Whitebirk Diversion A6119 (T)
Accrington
Samlesbury-Blackburn Ring Road A677 (T)
Blackburn
Hyndburn Diversion A679 (T)
Dunnockshaw By-Pass (T)
Knuzden Brook Diversion A677 (Class 1)
Crawshawbooth By-Pass A56(T)
Haslingden
Rawtanstall
Haslingden By-Pass (Class 1)
Internal Relief Road (T)
Darwen
Wheelton Diversion A674
Edenfield-Rawtenstall By-Pass (T)- under construction
0 1 2 3 6 m
N
M61- under construction

study area as a whole there is a high provision of garages and parking accommodation. The figures correlate fairly accurately with car ownership and show that on average there is only one car standing in the street for every five covered car spaces. This low proportion of street parking is explained by the high number of lock-ups on the many plots of waste ground in urban areas.

6.15 Over the period up to 1991 the number of cars in Great Britain is expected to continue rising steeply until about 1980, when it may tail off as saturation level is reached. Car ownership in North East Lancashire will, of course, be related to income levels, job opportunities, the development structure of towns and public transport facilities, but it seems highly likely that whatever happens it will continue to reflect national trends over the coming years.

Future Communications

6.16 Work is programmed to start early in 1969 on the A59 Clitheroe-Whalley By-pass, initially at two-lane standard. The third stage of the Clitheroe Internal By-pass (two lanes) is also due to start in 1968-69, while the Whalley Easterly By-pass is programmed for 1971-72. During the period up to 1981 other major improvements to classified roads will include the Haslingden By-pass and central area road improvements or by-passes at Burnley, Darwen, Nelson, Colne, Padiham and Wheelton (Fig. 6.B). By 1981 some 18 miles of two-lane road (to be converted later to two-lane dual carriageways) and some 19 miles of two-lane dual carriageways should have been constructed. This includes 25 miles of road improvements to trunk routes, mainly to A56 and A59. While the A56 proposals will improve access from the Burnley area and the Rossendale towns southwards towards Manchester, and the national motorway network, the A59 proposals will relieve local congestion, but not directly benefit the major urban areas. Blackburn will have improved access to M6 via A679 and to M61 via A674. In spite of improvements in Accrington and Blackburn the "southern trunk route" we referred to in Para.6 10 will remain severely congested. At present there are no specific proposals for the period after 1981.

6.17 Present policy indicates that including Todmorden only 10 of the present 19 railway passenger stations will remain open (Fig. 6.4). The line through Blackburn, Accrington and Burnley was one of the Trans-Pennine routes proposed for development in the "Development of the Major Railway Trunk Routes" report of February 1965, and it is planned to modernise the signalling system of this route by 1971. If passengers are to be attracted to the railways it will be necessary to provide

6.8 ROAD PROPOSALS

Major roads dual two lane	═══
Major roads two lane (ultimate dual two lane)	╌╌╌
Other major roads	───
Trunk roads dual two lane	═══
Other trunk roads	━━━
Study area boundary	▬ ▬ ▬
Programmed two lane	- - - - - -
Programmed two lane (ultimate dual two lane)	╍╍╍
Programmed dual two lane	≡≡≡
Proposed two lane	••••••••
Proposed two lane (ultimate dual two lane)	••••••••
Proposed dual two lane	••••••••
Existing Motorways	═══
Proposed Motorways	======

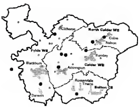
services that are competitive with road transport in terms of speed and frequency. The establishment of the passenger transport authorities promises to provide an overall framework within which all forms of public transport can be deployed in relation to the development of facilities for private transport to create an attractive integral service. The linear urban structure of North East Lancashire provides an excellent basis for this. At the present time there are 12 freight depots in the area, but in accordance with present railway policy - the concentration of traffic on a reduced number of freight terminals - the number of freight depots in the area is likely to be substantially reduced. It is also planned to close the freight line between Clitheroe and Hellifield in 1971.

Water Supply

6.18 Most of the study area is supplied with water by three boards - the Fylde Water Board (serving the Blackburn, Darwen and Clitheroe areas), the Calder Water Board (Burnley, Padiham and Accrington) and the North Calder Water Board (Barrowford, Nelson, Colne and Trawden) (Fig. 6.9). The supply networks are in good condition or being improved. Supplies are taken from impounding reservoirs, boreholes and in bulk from Manchester's Haweswater Aqueduct. Present and immediate future demands can easily be satisfied. In the long term additional requirements will depend on the development of co-ordinated regional schemes. The Rossendale Area is supplied by Bolton County Borough. Water supplies are limited until 1971 when water from Manchester's Lake District Scheme will be available

Drainage and Sewage Disposal

6.19 With the exception of Rossendale, which is in the Mersey and Weaver River Authority area, most of the study area is in the Lancashire River Authority area. Of the main rivers the Darwen and Calder are seriously polluted, whilst the Ribble, Brun and Pendle Water are of medium quality. Although recent severe floods have occurred in Darwen and Barrowford the study area as a whole does not suffer repeated flooding. Some improvements are already proposed and there are no serious natural obstacles to further improvement. There are 21 separate sewage authorities in the study area with a total of 27 sewage works, of which only 10 have dry weather flows in excess of 1 million gallons per day. With the



6.9 WATER SUPPLY & SEWERAGE

Water Board boundaries ----

Sewage pumping stations (capacity : over 1 million gallons/day dry weather flow) ●

Sewage pumping stations (capacity : under 1 million gallons/day dry weather flow) ○

exception of Barrowford and Haslingden sewage systems are generally adequate and most are capable of sufficient extension to satisfy foreseeable demands in new residential areas. Most systems are still combined.

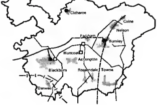
Electricity and Gas

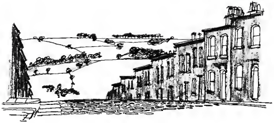
6.20 North East Lancashire is within the Pennine Area of the North Western Electricity Board. There are major electricity power stations at Blackburn, Huncoat, Padiham (Fig. 6.10), and local supplies are more than adequate to meet the present demand which has not maintained the expected growth rate over the last two years. By 1991 it is expected on an age basis that Padiham 'A' power station will be out of commission and Blackburn will have closed by 1995 The length of the future working life of Huncoat will extend until between 1993 and 1998 on an age basis. Changes to these estimates are, however, possible on the basis of other cost factors. In the 1980's Padiham is expected to have an annual load factor of 20% or below, Huncoat of 10% or below and Blackburn's load factor will be negligible. A 275 KV transmission line which is to be uprated to 400 KV passes through the area between Blackburn and Darwen.

6.21 The area of study is within the Central Lancashire area of the North Western Gas Board which produces gas at Blackburn, Burnley and Clitheroe (Fig. 6.10). New plant has been commissioned to satisfy demand before natural gas is introduced in 1969-1970. By 1975 the whole area will be using natural gas by which time the producing stations will be converted to distribution centres.

6.10 ELECTRICITY AND GAS

275 kv/cable to be uprated to 400 kv	—|—|
Existing 132 kv/cables	——
Existing high pressure gas mains	——
Proposed high pressure gas mains	— — —
Power stations	☐
Gas production plants	●





Terraced housing in Colne; an example of the widespread application in North East Lancashire of the grid-iron street layout on steep terrain. In this case the slope conceals industrial premises sited in the valley.

Section Seven

Population and migration

Background

7.1 The pattern of population growth in the 19th Century is described in Paragraph 4.9. The population of the Rossendale Area reached a peak about 1901 and those of the Blackburn and Burnley Areas about 1911. Since those dates there has been continuous decline in each Area, the present populations standing at 84% (Blackburn) and 75% (Burnley and Rossendale) of the peak levels. Migration has been, demonstrably, a major component of population change in each Area, never accounting for less than a half of the net decrease in any of the three Areas in any period since 1931. The period 1940-50 was exceptional in this respect owing to war conditions but we have no reason to believe that there was any change in trends during this period. In certain periods migration accounted for 80% or more of the net decrease - for example in Blackburn in the 1930's, in Rossendale in the 1960's. The effect of net emigration in the 20th Century has reinforced the historical tendency to low rates of natural change. Even before the peak populations were reached, rates of natural increase were lower in North East Lancashire than in England and Wales and were declining By the period 1931-39 the number of deaths was exceeding the number of births and only in 1961-66 did births once more outstrip deaths. The current rate of natural change, while positive, is well below the national rate Thus, both natural change and net migration have in the past contributed to net decreases in the populations of the three Areas. While natural change has recently become a positive component of the net change, migration has remained a negative item of far greater absolute magnitude and is still the most important factor affecting population change in North East Lancashire. Tables 7.1 to 7.3 give a comprehensive summary of the changes in each Area by natural causes and by migration, and Figures 7.1 to 7.3 show the changes since 1961 on the map. The 1966 base populations have already been enumerated by local authorities and Areas in Paragraphs 1.11 and 6.1.

Future Natural Change

7.2 Assuming zero future migration and no change in birth and death rates, we can derive broad

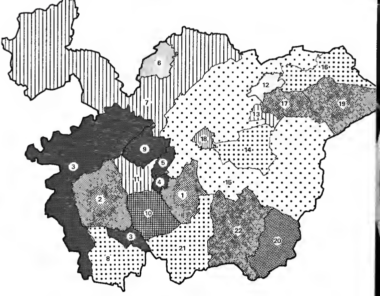
TABLE 7.1 CHANGES IN POPULATION : NORTH EAST LANCASHIRE 1931-39 and 1951-66

1931-39	Population		Net change 1931-39	Births/ Deaths	Migration	Total	% gross change due to migration	% gross change due to natural factors
	1931	1939						
North East Lancashire Subregion	552,819	502,616	-9.1%	-10,799	-39,404	-50,203	78%	22%
Blackburn Area	281,852	256,021	-9.2%	-5,227	-20,604	-25,831	80%	20%
Burnley Area	205,137	185,125	-9.8%	-4,317	-15,695	-20,012	78%	22%
Rossendale Area	65,830	61,470	-6.8%	-1,255	-3,105	-4,360	70%	30%

1951-61	Population		Net change 1951-61	Births/ Deaths	Migration	Armed forces estimated gain	Total	% gross change due to migration	% gross change due to natural factors
	1951	1961							
North East Lancashire Subregion	493,549	477,741	-3.2%	-6,621	-12,727	3,540	-15,808	66%	29%
Blackburn Area	256,340	251,080	-2.1%	-3,491	-3,619	1,850	-5,260	51%	39%
Burnley Area	179,329	171,253	-4.5%	-2,672	-6,684	1,280	-8,076	71%	25%
Rossendale Area	57,880	55,408	-4.3%	-458	-2,424	410	-2,472	84%	14%

1961-66	Population		Net change	Births/ Deaths	Migration	Armed forces estimated gain	Total	% gross change due to migration	% gross change due to natural factors
	1961	1966							
North East Lancashire Subregion	477,740	472,770	-1.0%	2,450	-7,920	500	-4,970	73%	23%
Blackburn Area	251,080	250,790	-0.1%	1,680	-2,233	(263)	-290	53%	40%
Burnley Area	171,250	168,230	-1.8%	440	-3,639	(179)	-3,020	85%	11%
Rossendale Area	55,410	53,750	-3.0%	330	-2,048	(58)	-1,660	84%	14%

Source: Registrar General's Mid-year Estimates
Figures in brackets represent pro-rata estimates only.

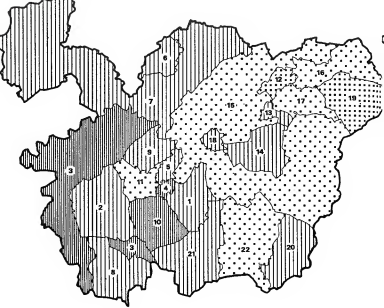


7.1 NET MIGRATION FROM THE STUDY AREA
1961-66

% of total population:

-0.90 and below	▩
-0.89 to -0.60	▒
-0.59 to -0.30	⁙
-0.29 to 0.00	⁚
0.00 to +0.29	⦀
+0.30 to +0.59	▥
+0.60 to +0.89	▓
+1.00 to +1.99	▦
+2.00 and above	■

1. Accrington MB
2. Blackburn CB
3. Blackburn RD
4. Church UD
5. Clayton-le-Moors UD
6. Clitheroe MB
7. Clitheroe RD
8. Darwen MB
9. Great Harwood UD
10. Oswaldtwistle UD
11. Rishton UD
12. Barrowford UD
13. Brierfield UD
14. Burnley CB
15. Burnley RD
16. Colne MB
17. Nelson MB
18. Padiham UD
19. Trawden UD
20. Bacup MB
21. Haslingden MB
22. Rawtenstall MB

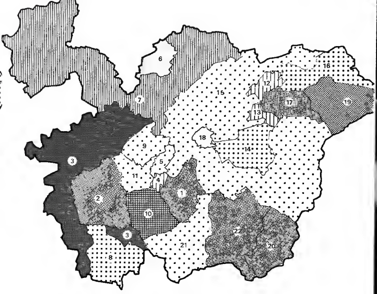


7.2 NATURAL POPULATION CHANGE IN THE STUDY AREA 1961-66

% of total population:

-0.59 to -0.30	⁙
-0.29 to 0.00	∵
0.00 to +0.29	||||
+0.30 to +0.59	||||||||

1. Accrington MB
2. Blackburn CB
3. Blackburn RD
4. Church UD
5. Clayton-le-Moors UD
6. Clitheroe MB
7. Clitheroe RD
8. Darwen MB
9. Great Harwood UD
10. Oswaldtwistle UD
11. Rishton UD
12. Barrowford UD
13. Brierfield UD
14. Burnley CB
15. Burnley RD
16. Colne MB
17. Nelson MB
18. Padiham UD
19. Trawden UD
20. Bacup MB
21. Haslingden MB
22. Rawtenstall MB



7.3 TOTAL POPULATION CHANGE IN THE STUDY AREA 1961-66

% of total population:

-0.90 and below	▓
-0.89 to -0.60	▒
-0.59 to -0.30	⁙
-0.29 to 0.00	⁚
0.00 to +0.29	|||
+0.30 to +0.59	||||||
+0.60 to +0.89	■
+1.00 to +1.99	▦
+2.00 and above	■

1.	Accrington MB
2.	Blackburn CB
3.	Blackburn RD
4.	Church UD
5.	Clayton-le-Moors UD
6.	Clitheroe MB
7.	Clitheroe RD
8.	Darwen MB
9.	Great Harwood UD
10.	Oswaldtwistle UD
11.	Rishton UD
12.	Barrowford UD
13.	Brierfield UD
14.	Burnley CB
15.	Burnley RD
16.	Colne MB
17.	Nelson MB
18.	Padiham UD
19.	Trawden UD
20.	Bacup MB
21.	Haslingden MB
22.	Rawtenstall MB

shown in Table 7.5 against the numbers in the older age groups. As in the case of births, the ratio is affected by the composition of the age group concerned, but it can be seen that in general we expect the effect of declining numbers of older persons on the number of deaths to be reinforced by improved rates of survival in that group as well as in other groups.

7.7 In summary, therefore, supposing that migration ceased at 1961, we would expect to see the development of a long-term upward trend in the rate of natural increase, most apparent in the Blackburn Area and to a lesser extent in Burnley. An essential point to the understanding of the Areas is that the increase in the numbers of younger persons that would occur if migration stopped may not take place, simply because the 20-39 age group is characterised by a high propensity to migrate. The picture is therefore unstable. On the one hand, if propensities to migrate from the subregion fall in future the growth of the younger age group could provide a basis for the regeneration of the population. On the other hand, continuing or increasing propensities could lead to higher net outflows, absolute reductions in both future births and deaths, and the shrinkage of the resident population. It is to migration that we now turn.

Migration - The Present Situation

7.8 We have discussed in the preceding sections population growth patterns in the three Areas which would probably emerge if migration ceased in 1961. Such an exercise provides a conceptual framework but it represents only the first, and simplest, stage in an analysis of future population change. Throughout this century migration has been the predominant factor in the subregion. A major aspect of the impact of developments elsewhere in Lancashire will probably be a change in work journey patterns or in population movements.

7.9 Information on migration is scant and must be interpreted with caution. Of primary importance in North East Lancashire is the distinction between gross and net flows across boundaries. Gross migration is defined as the total flow in one direction across a

TABLE 7.5 EXPECTED NUMBERS OF PERSONS IN OLDER AGE GROUPS, AND FUTURE DEATHS. NORTH EAST LANCASHIRE SUBREGION 1951 - 1991 (WITHOUT MIGRATION)

Area	Expected number of persons aged 50 and over	Expected number of deaths in the ensuing five years	Ratio
BLACKBURN			
1951	83,581*	22,593**	270
1961	87,086*	19,132**	220
1966	88,247	18,559	210
1971	86,223	18,073	209
1976	86,109	18,152	210
1981	83,790	17,632	211
1986	80,891	17,062	211
BURNLEY			
1951	60,481*	16,447**	272
1961	61,570*	13,107**	213
1966	59,176	13,043	212
1971	58,045	12,670	214
1976	55,363	12,655	218
1981	52,600	12,145	218
1986	49,929	11,581	220
ROSSENDALE			
1951	18,905*	5,439**	287
1961	19,145*	4,190**	218
1966	19,318	4,318	223
1971	18,531	3,973	214
1976	18,152	3,786	208
1981	17,317	3,956	228
1986	15,856	3,784	238

* Census

** recorded deaths, these are lower than the numbers which would be expected in the absence of migration specified boundary within a given period. Net migration is the difference between the gross in- and the gross out-movement in a given period. The evidence at our command strongly suggests that the ratio of gross to net movements in North East Lancashire is very high and we discuss this later. If this is so it means that slight divergencies from the trend of the gross figures in contrary directions would markedly affect the figure for net migration. If, throughout the recent period a similar relationship between gross and net movements has existed, (and we have only recent evidence by which to judge the value of the ratio), serious doubt is thrown on the validity of extrapolating trends as a means of predicting future flows, since the trends themselves may reflect coincidental movements of contrary directions in gross flows which, considered in isolation, would not be deemed significant.

7.10 Even if time-series data on gross flows were available extrapolation would be unreliable because of possible variations in factors which affect migration. It is particularly important, for example, that estimates of the future population should take account of the different economic prospects of the areas between which migration will occur. Estimates of possible future migration rates and their effect on the base population must therefore emerge from simultaneous consideration of a complex range of factors on which we have varying amounts of information. These include the motives of migrants and the effects of future economic change on the desires of people to move. The incidence and effects of future migration may be best evaluated by looking at the number, age and type of the people who move at present, their reasons for moving and the ways in which future changes will affect the groups involved.

7.11 The impact of migration in the past, measured be the figure for net migration, has varied between the three Areas and between different periods. In Table 7.6 estimates are shown of net emigration from each Area since 1921. There are no clear-cut trends. In all three Areas net emigration was higher in 1931-39 than in the decade 1951-61, but there has been some increase in net emigration since 1961. Table 7.7 shows the ten-yearly rate of net emigration

TABLE 7,6 NET MIGRATION - NORTH EAST LANCASHIRE 1921-1966

Years	Blackburn Area Persons per year	Burnley Area Persons per year	Rossendale Area Persons per year
1921-31	-1396(a)	-1574(a)	-287(a)
1931-39	-2575(a)	-1962(a)	-388(a)
1951-52	-133	-514	-158
1952-53	-541	-1311	-163
1953-54	+244	-204	+24
1954-55	-195	-219	-47
1955-56	-741	-1189	-353
1956-57	-1150	-1296	-363
1957-58	-1590	-1131	-463
1958-59	-1165	-908	-290
1959-60	-530	-1043	-164
1960-61	+500	+534	-393
1961-62	+657	-38	-232
1962-63	-461	-729	-290
1963-64	-831	-1037	-510
1964-65	-407	-1093	-494
1965-66	-931	-562	-468

(-) = Net emigration from North East Lancashire
(+) = Net immigration into North East Lancashire
(a) = Average yearly rates
Estimates derived from Registrar General's Mid Year Estimates of Population

related to the population within each Area at the beginning of each decade. It is clear that net emigration is still relatively high in the Burnley and Rossendale Areas. While the level in the Blackburn Area is substantially reduced compared with the 1930's, it rose during the 1960's and, with the exception of one or two years at the end of the 1950's, shows few signs of changing trend.

TABLE 7.7 DECENNIAL NET EMIGRATION AS A % OF POPULATION AT THE BEGINNING OF EACH DECADE.

	Areas of North East Lancashire		
	1930's	1950's	1960's
Blackburn	7.3	1.4	1.8
Burnley	7.6	3.7	4.2
Rossendale	4.2	4.2	7.3

7.12 The effect of migration on the rate of natural increase in an Area will depend basically on the numbers of migrants in the various age and sex groups, and these characteristics can be as important as the total numbers involved. No information was available on the age and sex characteristics of migrants from or to the three Areas and one of the purposes of the survey described below was to provide information on this point. The survey showed that the age sex characteristics of immigrants to the three Areas of North East Lancashire were typical of most migrant populations with concentrations in the younger age groups, but atypical of immigrants into Lancashire as a whole (excluding the two conurbations) in that the oldest age group, people aged 65 and over, was relatively smaller. This suggests that retirement as a motive for immigration played a less important part in North East Lancashire. Emigrants from the three Areas were similar in age-sex characteristic to emigrants from Lancashire as a whole, except that in the Rossendale and Burnley Areas there was a relatively greater concentration in the older age group. The characteristics of emigrants from the Blackburn Area were very similar to those of emigrants from Lancashire as a whole (excluding the two conurbations).

7.13 The propensity to emigrate[‡] within age groups from North East Lancashire as suggested by the survey, was compared with that from Lancashire as a whole in 1961, reduced by excluding the two conurbations. The value of the propensity was similar for the reduced area of Lancashire in 1961 as that for North East Lancashire in 1966, with the exception of the 15-24 age group. We expected under-representation in this group because our sampling unit was the household. This meant that people who had migrated with a household but had subsequently left it, were excluded from the sample. It was thought that this would mainly affect the 15-24 age group and adjustments were made accordingly. In the case of immigrants the propensity was similar to that for Lancashire as a whole (excluding the conurbations) except for the older age groups.

7.14 In our calculation of future population distribution in the three Areas we have assumed that the age and sex characteristics of migrants will be identical to those which we have found out by survey as has been described. Very little is known about the propensity to marry or the rates of fertility or survival of migrants in the subregion and it was not possible to deduce information on these factors from survey. Our experience with migrant populations in general is that the propensity to marry is higher than the average for England and Wales as a whole, age at marriage is earlier and the expected mean ultimate family size greater. We have therefore correspondingly adjusted these rates in projecting migrant populations. With respect to survival rates we have assumed that people leaving the subregion will be subject to national survival rates whereas immigrants will be subject to local rates which may themselves be expected to move towards national rates by 1991.

7.15 It is necessary to examine the causes of migration in addition to finding out what the characteristics of the migrants are likely to be. When the major causes of migration are identified it is possible to distinguish those which seem to be well established from those of a more temporary nature. Two recent surveys[*] have gathered information on migration relating in the first case to the whole of Great Britain and in the second to areas in North England including Durham and parts of Cumberland and Northumberland. The findings of these surveys.

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[*] 'Mobility and the North' Volumes I, II, III North Regional Planning Committee, July 1967
Labour Mobility in Great Britain. Amelia I. Harris for Government and Social Survey.

[‡] The propensity to emigrate is defined as the number of people of a particular age emigrating between the mid-years T and T + 1, divided by the number of residents of the same age at mid-year T in the exporting year

though useful in describing general relationships between migration and its causes, are insufficient for drawing conclusions about the study area since they do not identify direct linkages between existing migration and the specific social, economic and environmental conditions which give rise to it. Moreover, their emphasis was on total movement rather than movement into and out of narrowly defined areas such as Blackburn, Burnley and Rossendale. We therefore decided it was necessary to look at migration into and out of each of the three Areas of the North East Lancashire Subregion and identify the causal factors involved. We also wished to isolate those categories of migrants who might prove sensitive to the growth of a New Town in Central Lancashire. We therefore mounted a survey of persons who had moved out of and into the study area between mid-1965 and mid-1967.

7.16 It was difficult to obtain a comprehensive sample of migrants and we found it necessary to restrict the exercise to a study of household, rather than individual moves. The disadvantage of doing this as we have already mentioned, was that people who did not move with their families were missed out. These people are among the most mobile and their omission is important. For certain purposes, however, some adjustment to the overall results makes their omission less serious. The survey made it possible to chart the pattern of household movement within and out of North East Lancashire to analyse the factors underlying the decision to move. Details of the survey are to be found in Appendix B.

The present pattern of migration

7.17 We need to know how far the total migration picture represents a balance of flows between movement away from the study area and movements within the study area itself. This is essential, not only from the viewpoint of specific local authority areas, who need to know whether they are losing people to neighbouring areas or to more distant parts of the country, but also to a clearer understanding of the mechanics of the process by which the subregion as a whole comes to a net migration loss. 'True' migration is not easily separable from the much larger volume of movements which are essentially local in nature. We attempt therefore to define and quantify these two types of movement, and assess the effect of each on the study area. An elementary breakdown of population movements affecting the study area is given in Table 7.8. The figures for the year ending April 1961 are taken from the 1961 Census and, in consequence, exclude emigrants moving to destinations outside England and Wales. We estimate that these would account for between 5% - 10% of the total. The data for 1966 is drawn from the 1966 Census, with the exception of the emigration figures which we have calculated from other sources which show the total level of emigration to all destinations.

7.18 We see from Table 7.8 that the number of people moving within each local authority area is much higher than the numbers moving in or out. The level of such moves showed little change between the two years, representing an average of just under 6% of the population of the study area. A second point of interest, bearing in mind the substantial migration loss of the study area is the relative smallness of the difference between the gross in- and out-movements. Taking 1966, as this is the year for which comparable figures on immigration and emigration are given, we can say

Table 7.8

MIGRATION IN AREAS IN NORTH EAST LANCASHIRE SUBREGION 1961 and 1966

	Moves within Local Authorities		Moves into Local Authorities		Moves out of Local Authorities	
Year ending April	1961	1966	1961	1966	1961	1966
Blackburn Area	14,070	14,020	8,320	10,200	7,690	11,160
Burnley Area	10,360	8,590	6,840	6,680	6,050	7,220
Rossendale Area	3,920	3,220	1,990	1,570	2,520	2,030
North East Lancashire Sub Region	28,350	25,830	17,150	18,450	16,260	20,410

related to the population within each Area at the beginning of each decade. It is clear that net emigration is still relatively high in the Burnley and Rossendale Areas. While the level in the Blackburn Area is substantially reduced compared with the 1930's, it rose during the 1960's and, with the exception of one or two years at the end of the 1950's, shows few signs of changing trend.

TABLE 7.7 DECENNIAL NET EMIGRATION AS A % OF POPULATION AT THE BEGINNING OF EACH DECADE.

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7.12 The effect of migration on the rate of natural increase in an Area will depend basically on the numbers of migrants in the various age and sex groups, and these characteristics can be as important as the total numbers involved. No information was available on the age and sex characteristics of migrants from or to the three Areas and one of the purposes of the survey described below was to provide information on this point. The survey showed that the age sex characteristics of immigrants to the three Areas of North East Lancashire were typical of most migrant populations with concentrations in the younger age groups, but atypical of immigrants into Lancashire as a whole (excluding the two conurbations) in that the oldest age group, people aged 65 and over, was relatively smaller. This suggests that retirement as a motive for immigration played a less important part in North East Lancashire. Emigrants from the three Areas were similar in age-sex characteristic to emigrants from Lancashire as a whole, except that in the Rossendale and Burnley Areas there was a relatively greater concentration in the older age group. The characteristics of emigrants from the Blackburn Area were very similar to those of emigrants from Lancashire as a whole (excluding the two conurbations).

7.13 The propensity to emigrate[‡] within age groups from North East Lancashire as suggested by the survey, was compared with that from Lancashire as a whole in 1961, reduced by excluding the two conurbations. The value of the propensity was similar for the reduced area of Lancashire in 1961 as that for North East Lancashire in 1966, with the exception of the 15-24 age group. We expected under-representation in this group because our sampling unit was the household. This meant that people who had migrated with a household but had subsequently left it, were excluded from the sample. It was thought that this would mainly affect the 15-24 age group and adjustments were made accordingly. In the case of immigrants the propensity was similar to that for Lancashire as a whole (excluding the conurbations) except for the older age groups.

7.14 In our calculation of future population distribution in the three Areas we have assumed that the age and sex characteristics of migrants will be identical to those which we have found our by survey as has been described. Very little is known about the propensity to marry or the rates of fertility or survival of migrants in the subregion and it was not possible to deduce information on these factors from survey Our experience with migrant populations in general is that the propensity to marry is higher than the average for England and Wales as a whole, age at marriage is earlier and the expected mean ultimate family size greater. We have therefore correspondingly adjusted these rates in projecting migrant populations. With respect to survival rates we have assumed that people leaving the subregion will be subject to national survival rates whereas immigrants will be subject to local rates which may themselves be expected to move towards national rates by 1991.

7.15 It is necessary to examine the causes of migration in addition to finding out what the characteristics of the migrants are likely to be. When the major causes of migration are identified it is possible to distinguish those which seem to be well established from those of a more temporary nature. Two recent surveys[*] have gathered information on migration relating in the first case to the whole of Great Britain and in the second to areas in North England including Durham and parts of Cumberland and Northumberland. The findings of these surveys, though useful in describing general relationships between migration and its causes, are insufficient for drawing conclusions about the study area since they do not identify direct linkages between existing migration and the specific social, economic and environmental conditions which give rise to it. Moreover, their emphasis was on total movement rather than movement into and out of narrowly defined areas such as Blackburn, Burnley and Rossendale. We therefore decided it was necessary to look at migration into and out of each of the three Areas of the North East Lancashire Subregion and identify the causal factors involved. We also wished to isolate those categories of migrants who might prove sensitive to the growth of a New Town in Central Lancashire. We therefore mounted a survey of persons who had moved out of and into the study area between mid-1965 and mid-1967.

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[*] 'Mobility and the North' Volumes I, II, III North Regional Planning Committee, July 1967 Labour Mobility in Great Britain. Amelia I. Harris for Government and Social Survey.

[‡] The propensity to emigrate is defined as the number of people of a particular age emigrating between the mid-years T and T + 1, divided by the number of residents of the same age at mid-year T in the exporting year.

7.16 It was difficult to obtain a comprehensive sample of migrants and we found it necessary to restrict the exercise to a study of household, rather than individual moves. The disadvantage of doing this as we have already mentioned, was that people who did not move with their families were missed out. These people are among the most mobile and their omission is important. For certain purposes, however, some adjustment to the overall results makes their omission less serious. The survey made it possible to chart the pattern of household movement within and out of North East Lancashire to analyse the factors underlying the decision to move. Details of the survey are to be found in Appendix B.

The present pattern of migration

7.17 We need to know how far the total migration picture represents a balance of flows between movement away from the study area and movements within the study area itself. This is essential, not only from the viewpoint of specific local authority areas, who need to know whether they are losing people to neighbouring areas or to more distant parts of the country, but also to a clearer understanding of the mechanics of the process by which the subregion as a whole comes to a net migration loss. 'True' migration is not easily separable from the much larger volume of movements which are essentially local in nature. We attempt therefore to define and quantify these two types of movement, and assess the effect of each on the study area. An elementary breakdown of population movements affecting the study area is given in Table 7.8. The figures for the year ending April 1961 are taken from the 1961 Census and, in consequence, exclude emigrants moving to destinations outside England and Wales. We estimate that these would account for between 5% - 10% of the total. The data for 1966 is drawn from the 1966 Census, with the exception of the emigration figures which we have calculated from other sources which show the total level of emigration to all destinations.

7.18 We see from Table 7.8 that the number of people moving within each local authority area is much higher than the numbers moving in or out. The level of such moves showed little change between the two years, representing an average of just under 6% of the population of the study area. A second point of interest, bearing in mind the substantial migration loss of the study area is the relative smallness of the difference between the gross in- and out-movements. Taking 1966, as this is the year for which comparable figures on immigration and emigration are given, we can say

Table 7.8

MIGRATION IN AREAS IN NORTH EAST LANCASHIRE SUBREGION 1961 and 1966

	Moves within Local Authorities		Moves into Local Authorities		Moves out of Local Authorities	
Year ending April	1961	1966	1961	1966	1961	1966
Blackburn Area	14,070	14,020	8,320	10,200	7,690	11,160
Burnley Area	10,360	8,590	6,840	6,680	6,050	7,220
Rossendale Area	3,920	3,220	1,990	1,570	2,520	2,030
North East Lancashire Suh Region	28,350	25,830	17,150	18,450	16,260	20,410

TABLE 7.9 MOVEMENTS IN THE STUDY AREA : MID 1965 - MID 1967

	Total Moves	Moves within local authority	Moves to remainder Study Area	Moves to outside the Study Area
BLACKBURN CB	6194	4858	693	643
ACCRINGTON MB	2074	1365	465	244
CHURCH UD	333	137	163	33
CLAYTON LE MOORS UD	291	150	104	37
CLITHEROE MB	728	498	105	125
DARWEN MB	1463	1100	187	176
GREAT HARWOOD UD	572	394	110	68
OSWALDTWISTLE UD	571	304	189	78
RISHTON UD	232	128	71	33
BLACKBURN RD	481	164	194	123
CLITHEROE RD	362	159	89	114
SUB TOTAL Blackburn Area	13301	9257	2370	1674
BURNLEY CB	4506	3598	499	409
BARROWFORD UD	235	96	108	31
BRIERFIELD UD	447	262	119	66
COLNE MB	1180	866	168	146
NELSON MB	1949	1260	429	260
PADIHAM UD	667	440	153	74
TRAWDEN UD	110	53	43	14
BURNLEY RD	781	311	326	144
SUB TOTAL Burnley Area	9875	6886	1845	1144
BACUP MB	1353	960	174	219
HASLINGDEN MB	971	678	161	132
RAWTENSTALL MB	1520	1152	187	181
SUB TOTAL Rossendale Area	3844	2790	522	532
GRAND TOTAL North East Lancashire	27020	18933	4737	3350

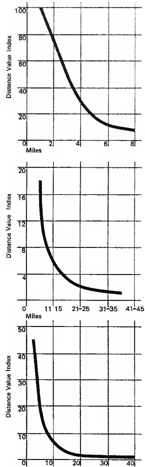
that for every 100 people moving out of local authorities in the study area approximately 90 people moved in. Two factors help to explain this situation. Firstly, it has long been recognised in migration theory that for a given area the level of immigration is closely related to the level of emigration. A high level of emigration may induce something of a 'vacuum' effect in that empty houses and unfilled jobs are left behind by emigrants and these tend to act as an attraction factor, increasing the number of immigrants. These replacement flows may not be immediate and are unlikely to equal in size the outward flows, since the relative unattractiveness of the area which has induced migration will still be present. But there will come a point when, for example, house prices fall or wages rise due to shortage of labour, at which the area becomes sufficiently attractive in certain respects to pull in migrants. The second factor which we have already stressed, is that a large proportion of movement consists of short-distance moves which are extensions of the local movements taking place within local authority borders. As we show later, there is a very real difference both in the motivation and character of these short-distance moves compared with the longer-distance 'true' migration. Although they are caused by factors which are essentially different, the two types of migration are often both positive or negative for a particular area at the same time. Some idea of the relative scale of the two types of movement as they affect the study area can be gained from Table 7.9. This shows the movements of households within and from the study area in the period mid-1965 to mid-1967, and divides movements from each local authority area into moves to the rest of the study area and moves outside it. This is a somewhat artificial division since it separates short-distance moves to destinations outside the subregion from short-distance moves within it, but it provides an approximate indication of the nature of total out-movements.

7.19 It can be seen that in most cases a clear majority of moves are of short distance to the remainder of the study area, and this applies even to moves out of local authority areas. The scale of these short-distance moves makes it essential to know for individual local authority areas whether the migration loss of an area is due to short-distance or long-distance moves, and the major destinations of each. The detailed household moves within local authority boundaries are shown in Tables B3 and B4 of Appendix B. Two of the largest net movements are from Blackburn CB to Blackburn RD and from Burnley CB to Burnley RD. This type of movement is almost certainly part of the general current trend for people to move out of large towns and cities into the surrounding suburbs and rural areas, and is not directly related to the factors causing the overall migration loss of the study area. However, while specific flows of this nature may affect the scale of the migration balance, in general they do not alter the overall positive or negative nature of the balance. The evidence of these two tables tends to suggest that individual local authority areas are broadly either 'attractive' for all categories of migrants, whatever their motivation or distance of move, or 'unattractive'.

The Effect of Distance on Migration

7.20 We have referred to differences in both scale and motivation of short-distance movements. We now attempt to isolate and quantify the effect of distance. The main factors which will affect the size of population flows between two areas are firstly the relative attractiveness of the two areas in terms of such factors as job opportunities, housing conditions and the physical and cultural environment, secondly, the relative size of the two areas, for this will impose physical limitations on the numbers of jobs, houses, etc., available to migrants; and finally, the distance between the two areas and the nature of intervening opportunities.

7.21 To isolate the effect of distance we had to take account of the size of different destinations, as measured by population, for the unequal distribution of population within and around the study area will obviously distort the pattern of migration flows from that which might be expected by simple comparisons of relative distances. For each flow in terms of household moves between mid-1965 and mid-1967, both within the study area and from the area to outside destinations, we therefore computed a value for number of migrants in relation to population of destination. For simplicity, we will refer to this as the "Distance Value". The results grouped by distance of destination are shown in Figure 7.4. The results are presented in the form of an index taking the actual Distance Value for the lowest completed mileage category at 100. This shows that migration declines sharply with distance, and that the fall is proportionately lower for each progressive increment of distance. What also emerges is that at longer distances migration is very much lower in volume, and is considerably less affected by the distance of destination. Our analysis of emigration from the study area suggests that the effect of distance is negligible at distances greater than 50-60 miles. If a destination is further away from the study area than this, the size of the flow will depend almost solely on the relative attractiveness of origin and destination. The graph shows, however, that there is no such plateau at the lower end of the distance scale, at least down to 1 mile which is the lowest distance breakdown. On average, migration flows



7.4 EFFECT OF DISTANCE ON MIGRATION

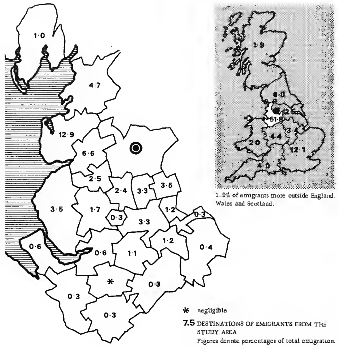
The top graph shows the effect of distance on movements within the study area. The middle graph deals with emigration from the study area. The final graph adds the two types of movement together.

between two points which are five miles apart will be no more than about 20% of that between two points which are only 1 mile apart.

7.22 Even within the range of movement upon which distance has a measurable effect, it is evident that there is a basic change in the scale and character of migration at between 10 and 15 miles. For distances shorter than this migration is large in volume and is very greatly affected by distance. At longer distances the volume of migration is much lower and the effect of distance considerably less marked. This evidence is supported by our survey of migrants leaving the study area, which showed that at distances up to 10 miles housing reasons were the dominant motivation of migrants, while at longer distances (even in the 11-30 miles category) housing reasons were negligible. It is obvious that these two types of movement are not mutally exclusive. There will be a few people moving for work reasons at distances below 10 miles, and a few moving longer distances for housing reasons. However, the break, both in scale and character seems sufficiently decisive to enable us to divide movements in and from the study area between two broad categories:

a) Up to 10-15 miles: these are essentially local movements, motivated largely by housing reasons, whose volume is large and decisively affected by distance.

b) More than 15 miles: this is 'true' migration. motivated by a wide variety of reasons but with housing reasons negligible, and much smaller in scale. Distance still affects the level of migration up to around 50-60 miles, but with the relative attractiveness of destinations becoming increasingly more important.



1.9% of emigrants more outside England, Wales and Scotland.

* negligible

7.5 DESTINATIONS OF EMIGRANTS FROM THE STUDY AREA
Figures denote percentages of total emigration.

The Pattern of Emigration

7.23 Having described the nature of movements to and from the study area, we now present a more detailed breakdown of the pattern of emigration. In contrast to the sections which follow, this analysis is based upon a complete record of all migrant households available from the sampling frame. Figure 7.5 shows the destination of households moving from the area in the two years from July 1965 to June 1967. In these two years 51.8% of migrants moved to the remainder of the North West Region, although the proportion declined from 53.2% to 50.8% between the two years. This change, together with an overall increase in the number of migrants in the second year may only be a temporary fluctuation, but it is noteworthy that virtually half the migrants moved outside the North West Region in both years. These migrants were distributed between the other regions broadly in proportion to their relative population, with the exception of the nearby northern regions.

7.24 As far as movement within the North West Region is concerned, the most interesting point is the very high proportion (in relation to its population and

TABLE 7.10 REASONS FOR MOVEMENT

	PRIMARY REASONS %	ALL REASONS * %
Percentage who moved for:		
Work	39	55
Housing	5	28
Climate and Environment	15	45
Family	18	40
Other Reasons	4	9
No Primary Reasons Stated	20	-

(Total number of respondents = 1,440)

* Percentages do not add up to 100% since many respondents gave more than one reason

TABLE 7.11 PRIMARY REASONS FOR MOVEMENT : AREAS WITHIN NORTH EAST LANCASHIRE SUBREGION

	BLACKBURN AREA	BURNLEY AREA	ROSSENDALE AREA
Percentage who moved for:			
Work	40%	42%	27%
Housing	5	3	9
Climate and Environment	14	14	20
Family	18	19	17
Other Reasons	4	4	5
No Primary Reason Stated	19	18	23
(Total number of respondents	695	523	222)

distance from the study area), moving to the Lancaster-Fylde Subregion, which includes the seaside towns of Blackpool, Morecambe and Lytham St. Annes. The main attraction of these areas is their climate and generally pleasant environment, rather than the number of employment opportunities or houses. This attribute of a pleasant environment is also important in less obvious cases, such as the flows to the Preston and Chorley Subregions, where a clear majority of migrants go to the rural areas rather than the town themselves. The importance of this factor will be examined in more detail in Section 17. At this stage we have simply illustrated its major importance in the total volume of migration from the subregion.

The Nature of Emigration

7.25 We asked migrants to state their reasons for

TABLE 7 12 REASONS FOR MOVEMENT : BY DISTANCE OF MOVE

	PRIMARY REASON MILES				ALL REASONS** MILES			
	0-10 %	11-30 %	31-100 %	101+ %	0-10 %	11-30 %	31-100 %	101+ %
% who moved for:								
Work	19	40	43	41	36	54	58	63
Housing	22	5	2	*	60	26	23	22
Climate & Environment	7	11	16	23	42	39	43	57
Family	18	20	18	15	36	42	41	37
Other Reasons	7	4	3	5	11	9	8	10
No primary reason stated	28	20	18	16	1	1	1	1
Total number of respondents	169,100	431.100	501,100	324,100	169,100	431,100	501,000	324,100

* = less than .5%

** Percentages do not add up to 100% since many respondents gave more than one reason.

moving from the study area, and to rank them in order of importance. The proportionate breakdown of both primary reasons and all reasons, as often more than one reason was given, is shown in Table 7.10. While work reasons are the most importance primary motivation for emigration, climate, environment and housing reasons are especially important contributory secondary motives. This general pattern was broadly similar in all three Areas of the subregion, but Table 7.11 shows that there was some divergence in the case of Rossendale. These differences are also reflected in the type of migrants leaving the Area, in that Rossendale has a higher proportion of its emigrants in the older age groups (especially retired people) and in the lower social classes. Bearing in mind the higher rate of emigration in Rossendale, the most likely explanation is not that the number of people leaving for work reasons is substantially less than in the Blackburn or Burnley Areas, but that a larger number leave for reasons connected with housing or climate and environment. This is probably due both to a greater degree of dissatisfaction with living conditions and to the Area's relationship with towns to the south which means that a high proportion of people making essentially local moves mainly for reasons of housing are lost to the study area.

7.26 Housing forms a relatively low proportion of primary reasons given for moves. This is to be expected since the survey dealt only with moves away from the study area, and therefore takes no account of the much larger number of local moves which take place within the study area. Basically, only people moving relatively short distances are motivated primarily by housing, and such migrants account for the majority of local moves. Even in the context of the survey this point emerges when migrants are analysed by distance of move. Table 7.2 shows that for migrants moving up to ten miles housing is the most important single primary reason, and that it is a contributory factor for 60% of such migrants. The relative importance of housing as a primary motivation for this group of migrants is underestimated to some extent, since one-third of those listed under work reasons in fact simply moved nearer their jobs. Furthermore, many of the high proportion of migrants who did not single out a specific primary reason listed housing and a dislike of their surroundings as motivations. A survey of people moving within the study area, and therefore moving comparable (although on average shorter) distances, showed that about two-thirds moved primarily for housing reasons. The essentially local nature of housing moves is emphasised by the fact that in our survey of emigrants over 50% occurred within a distance of 10 miles from the study area, and 83% within a distance of 30 miles.

TABLE 7.13 WORK AS A PRIMARY REASON FOR MIGRATION

	(a) AGE OF HEAD OF HOUSEHOLD						
	15-19 %	20-24 %	25-30 %	31-44 %	45-54 %	55-59 %	60+ %
% Giving work as primary reason	-	54	60	57	35	26	2
Number on which % based	9	57	228	496	201	100	337

	(b) SOCIAL CLASS OF HEAD OF HOUSEHOLD					
	Professional		SKILLED		UNSKILLED	
			Non-manual	Manual	Non-manual	Manual
	I	II	III$_1$	III$_2$	IV	V
% Giving work as primary reason:	57%	59%	53%	37%	*	43%
Number on which % based:	145	373	204	246	15	37

7.27 Whilst overall work reasons were the most important primary motive for emigrants, the importance of this motivation varied considerably between different types of migrant. Table 7.13 shows the proportion of migrants who moved primarily for work reasons, analysed by age and social class. As might be expected, the importance of the work motive declines sharply after the 31-44 age group, but was uniformly high in the age groups 20-44 and it is of much greater importance among the higher social classes. A detailed analysis of all work-motivated emigrants reveals the pattern of detailed reasons shown in Table 7.14. This analysis shows that what might be termed non-voluntary moves, i.e., transfers and promotions, account for over one-third of all emigrants moving for work reasons.

TABLE 7.14 WORK REASONS FOR MIGRATION

Percentage who moved for reasons of:	
Poor pay/better job	43%
Prospects poor/no security	23
Transfer/promotion	36
Unemployment/redundancy	10
All other reasons	29
(Total moves involved)	52

7.28 Climate and environment were mentioned by almost half those moving from the Areas as being factors in their decisions to leave. The main elements within this heading and their relative importance for movement are set out in Table 7.15. Climatic factors are by far the most important of this group. Their importance varies to a certain extent with the originating Area of the migrants - the climate of the Burnley and Rossendale Areas received more adverse comment than that of the Blackburn Area.

TABLE 7.15 CLIMATE AND ENVIRONMENT REASONS FOR MIGRATION

Percentage who moved for reasons of:	
Surroundings	41%
Climate	78
Facilities	40
Other reasons	35
(Total moves involved	210)

TABLE 7.16 FAMILY REASONS FOR MIGRATION

Percentage who moved for reasons of:	
Marriage	9%
Living with friends/relatives	23
Being near friends/relatives	51
Retirement	26
All other	1
(Total moves involved	262)

Percentages in Tables 21.4, 7.15 and 7.16 do not total 100% as many migrants gave more than one reason.

TABLE 7.17 INDUSTRY OF ORIGIN OF EMIGRANTS

INDUSTRY OF ORIGIN	% ECONOMICALLY ACTIVE EMIGRANTS
Engineering	15.1
Professional & Scientific Services	14.9
Public Administration	14.9
Textiles	7.3
Distribution	6.8
Miscellaneous Services	5.6
Transport & Communications	4.9
Paper, Printing and Publishing	4.8
Insurance, Banking and Finance	4.5
Vehicles	3.4
Gas, Electricity, Water	3.2
All Other	14.4

7.29 Reasons connected with their family circumstances were mentioned by 40% of the migrants who responded to the questionnaire. Table 7.16 gives a detailed breakdown of this group. About three-quarters of those moving for family reasons mentioned their desire to live with or near friends and relatives. Such considerations appear to motivate the more elderly migrant most strongly and, of course, the widowed and divorced.

7.30 We asked respondents in the survey to state their employer both before and after they moved from the study area Table 7.17 shows the proportionate breakdown of economically active heads of migrant households, classified by industry of employment before they moved. We thought it reasonable to suppose, as a first hypothesis, that those industries which experienced a decline in total numbers in employment during the years 1963-1966 would account for a very high proportion of emigrants. It turns out that this is not so. The most obvious case is that of the textile industry, where prolonged and substantial decline does not seem to have caused emigration of a corresponding magnitude - the textile industry, although employing 28% of the male workforce accounts for only 7% of migrants. Again the engineering industry, which has increased the number of jobs provided in the area quite substantially in recent years, still provides the largest proportion of emigrants. Evidently, then, a simple theory of emigration based on growth and decline in certain sectors of industrial employment does not fit the facts of the situation.

The Nature of Immigration

7.31 Although the main emphasis of this section has been placed on the nature and pattern of emigration from the study area, it is also important to consider the nature of immigration, in particular to see whether the motivations and characteristics of the immigrants show any differences from those moving out. Our data for this section has been derived from two sources

a) A sample survey carried out in conjunction with the full survey of emigrants, covering the same points, and dealing with the same period from mid-1965 to mid-1967.
b) A survey carried out by Mrs. K.G. Pickett of Liverpool University, based on personal interviews with people who have moved into the study area in the past few years.

Owing to the small numbers of people covered by these surveys, it was not possible to examine the results in the same degree of detail as was possible for emigrants, but even so, a broad comparison reveals substantial differences between the two types of migrant.

7.32 The primary reasons for moving of immigrants and emigrants are shown in Table 7.18. The major difference between the two groups lies in the proportion who move in search of a better climate or environment. While almost one-fifth of emigrants move for this reason, the proportion moving into the study area for this reason is almost negligible. This factor constitutes the major gap between immigration and emigration, for on every other reason the area attracts at least as many people in as it loses. We may infer from this that perhaps one way of improving the net migration balance of the sub-region would be to improve the quality of its environment. While it is true that people who at present move primarily for this reason might in any event move for some other reason, it is undeniable that this is the one area in which North East Lancashire's pull is seriously deficient, relative to alternative destinations. The current migration loss of the sub-region does not appear to be only a reflection of its economic position vis-a-vis other areas, but is largely due to the fact that numbers of its residents are dissatisfied with the subregion as a place to live. We deal with the implications of this most important point in Section 12.

7.33 A more detailed analysis of the reasons immigrants have for moving shows that the proportionate breakdown of the work category was similar to that for emigrants with, as in our survey of emigrants, approximately one-third being transferred or promoted by their employer and the great bulk of the remainder moving to find a job that was better, in respect of salary, prospects or security, than their previous one. The immigrants moving for work reasons tended to have travelled furthest, as we found to be the case with emigrants, and they formed almost 75% of those immigrants moving more than 100 miles. It was significant that a small proportion (about 7% of those moving for work reasons) had moved to buy their own business or shop, whereas only a negligible number of emigrants moved for this reason. This might be expected since the number of vacant business opportunities is likely to be above-average in the study area, as it has declined in total population size.

7.34 The proportion of immigrants moving for housing reasons, although still small, was considerably higher than for emigrants Most of these people came from relatively short distances, under 30 miles, and almost half had moved because there was a shortage of properties for sale or rent in their former area, while almost no emigrants gave this reason. Bearing in mind the higher proportion of immigrants moving for housing reasons, it may well be that the ample, if largely obsolescent (and therefore cheap) housing stock of the subregion constitutes an attraction to

TABLE 7.18 REASONS FOR IMMIGRATION AND EMIGRATION

Primary Reason	Immigrants	Emigrants
Work	57%	49%
Housing	11	6
Climate and Environment	2	19
Family	24	22
Other Reasons	6	5
	100	100

people in neighbouring areas with a relative shortage of housing at similar prices.

7.35 The proportion of immigrants moving for family reasons was similar to this category among emigrants, both in distance moved, which was fairly evenly spread but concentrated somewhat on the lower distance categories, and in most people moving to live with or near friends or relatives.

7.36 The proportionate breakdown of immigrants into age categories compared with that of emigrants is shown in Table 7.19 together with the average household sizes. While the proportions accounted for by the intermediate age groups are very similar, the two categories of migrants differ markedly at the extreme ends of the age scale. There is a far larger number of old people of retirement age leaving the study area than entering it, presumably because it can offer few advantages as a congenial place for retirement. On the other hand, there is a substantially higher proportion of young children among immigrants, but this is a function of larger family size rather than an indication of a higher proportion of young married migrants. As a result of these two differences the average size of household was significantly higher for immigrants than for emigrants, and average age was also notably lower. It may therefore be said that although the total number of immigrants is lower than that of emigrants, their demographic characteristics are perhaps less unfavourable to the eventual natural increase of the study area's population than might otherwise have been expected.

7.37 Table 7.20 shows the relative proportions of immigrants and emigrants moving from various distances. This analysis shows that a substantially higher proportion of immigrants come from long distances and rather fewer from destinations which are at short and medium distances from the study area. Some confirmation of this pattern is provided by the 1961 Census Migration Tables which show that, for the local authorities within the study area for which detailed figures were given, a slightly higher proportion of immigrants came from outside Lancashire. As stated above, most of the immigrants who moved more than 100 miles moved primarily for work reasons, but compared with other immigrants moving for this reason, a higher proportion stressed the inadequacies of employment opportunities in their former area. In addition, a higher proportion of this group mentioned housing reasons as a secondary motive than did in the medium distance group (31-100 miles). The most significant point emerging from a detailed analysis of the origins of immigrants concerns those people moving relatively short distances, broadly up to 30 miles. In this category the Blackburn Area drew the great majority of its immigrants from the remainder of Lancashire, particularly South East Lancashire, while for the Burnley Area there was an equally clear emphasis on nearby areas in the West Riding of Yorkshire. For immigrants moving longer distances the pattern of origins was more diverse, and on the basis of our limited data no one area or type of origin emerged as being especially important.

7.38 Before we can make propositions of the future population levels for the study area we must also consider employment prospects. We now go on to do this in Sections 8, 9 and 10 and our population projection based on the combined effects of natural growth and migration, employment and journey to work are set out in Section 11.

TABLE 7.19 AGES OF IMMIGRANTS & EMIGRANTS

Age	Immigrants	Emigrants
0-14	38%	31%
15-24	11	10
25-30	12	12
31-44	22	21
45-54	9	8
55-59	2	3
60 years and over	2	12
Not answered	4	4
Average size of household	3.71	2.91

Note: The sample does not provide adequate coverage of the age groups 15-19 and 20-24.

TABLE 7.20 DISTANCE OF MOVES

Distance	Immigrants	Emigrants
0-10 miles	10%	12%
11-30	26	30
31-100	28	35
101 miles or more	36	23

7.38 Before we can make projections of the future population levels for the study area we must consider employment prospects (Sections 8 and 9) and journey to work (Section 10). Our population projection based on the combined effects of natural growth and migration, employment and journey to work are set out in Section 11.

View eastwards along the River Calder at Padiham.

Section Eight

Manufacturing industry

The Growth of the Industrial Pattern

8.1 North East Lancashire is an example of two trends in the industrial growth of Great Britain - the emergence of regions of intense specialisation within a single industry during the 19th Century, and the later development of a more diverse industrial base in these areas. The economy of North East Lancashire is still in a transitional state between specialisation and diversification. Cotton spinning and weaving were introduced into the area in the late 18th Century and achieved their greatest growth during the following 100 years. During the 19th Century population and employment grew at rates well above the national average, but this growth was already slowing down before the end of the century. In the depression of the inter-war years textile manufacture was among the traditional industries hardest hit by the slump, and in 1931 there were 120,000 unemployed in the study area. Towards the end of the 1930's some new industries began to move into the area. The Second World War quickly transformed the labour surplus in the area into a shortage, and the cotton industry was forcibly contracted in order to provide workers for the war industries which were moved into the subregion under the policy of strategic dispersal. Some of these industries remained after the war and so further aided the process of diversification. During the late 1940's there was a short-lived cotton boom as a result of peacetime restocking. This reached its peak in 1951 and was followed by a very sudden recession. Since then the cotton industry has declined fairly steadily, mainly as the result of continuing overseas competition, but the newer industries have grown sufficiently now to absorb most of the labour shed by the declining textile industry.

8.2 Employment in manufacturing industry has been declining at a decreasing rate from 1953 onwards in North East Lancashire. By comparison there was a decline from 1953 to 1963 in the North West Region as a whole and subsequent slight growth. In Great Britain employment has been growing at an increasing rate over the whole period (Tables 8.1 and 8.2). The main decline in North East Lancashire manufacturing employment since 1953 has taken place in the textile industry with slight declines in food and drink,

TABLE 8.1 NUMBERS IN THOUSANDS EMPLOYED IN MANUFACTURING INDUSTRY 1953-66

S.I.C.	NORTH EAST LANCASHIRE 1953 A	1959 A	1963 A	1966 A	NORTH WEST REGION 1953 B	1959 A	1963 A	1966 A	GREAT BRITAIN 1953 B	1959 A	1963 A	1966 A
III	6.48	4.60	5.50	5.32	121.8	124.4	126.2	125.1	805.2	780.5	804.9	811.2
IV	3.44	3.88	3.68	3.54	114.3	129.2	122.3	119.4	486.5	515.3	511.2	524.6
V	1.23	1.33	1.36	1.48	43.6	41.5	37.6	40.3	595.8	572.8	591.4	618.8
VI, IX	27.90	30.52	35.75	38.92	301.2	315.1	344.3	374.2	2181.0	2411.5	2670.9	2901.5
VII	-	-	-	-	42.1	39.9	30.6	29.5	285.3	266.4	211.2	200.5
VIII	3.11	6.70	6.82	6.26	99.3	101.7	114.6	116.7	820.8	859.8	865.9	852.6
X	81.80	63.78	48.68	45.47	372.0	299.0	234.9	220.7	963.7	839.7	776.4	756.6
XI	1.16	0.88	0.79	0.75	13.6	10.6	9.7	9.7	72.2	62.8	61.6	59.3
XII	12.56	10.80	11.22	11.13	119.5	99.4	99.1	93.7	626.8	546.0	542.8	542.8
XIII	3.18	2.48	2.61	2.45	42.7	44.7	46.0	48.6	332.9	323.0	337.0	348.3
XIV	2.04	1.83	2.47	2.91	34.9	29.3	30.2	31.0	290.8	279.4	280.8	290.8
XV	6.61	7.45	8.92	9.53	70.9	79.5	88.0	89.4	505.5	568.7	620.8	641.0
XVI	1.69	2.29	2.79	2.86	52.7	55.5	58.1	60.3	252.8	277.8	306.8	338.2
T	151.19	136.57	130.38	130.63	1428.6	1369.8	1341.6	1358.3	8219.3	8303.7	8581.5	8886.2

A - MID JUNE)
B - END MAY)
Where these are different the totals may not explain the estimated rates of change, which are calculated on the basis of figures for the same period in each year.

TABLE 8.2 COMPOUND ANNUAL AVERAGE PERCENTAGE RATES OF CHANGE IN MANUFACTURING EMPLOYMENT FOR PERIODS 1953-66.

S.I.C.	NORTH EAST LANCASHIRE 1953-59	1959-63	1963-66	NORTH WEST REGION 1953-59	1959-63	1963-66	GREAT BRITAIN 1953-59	1959-63	1963-66
III	-5.9	4.8	-1.1	2.1	0.3	-0.3	1.1	0.8	0.2
IV	0.8	-1.3	-1.3	1.7	-1.4	-0.8	1.7	-0.2	0.9
V	1.3	0.5	3.0	0.3	-2.4	2.3	0.2	0.8	1.5
VI, IX	1.5	4.0	2.9	1.1	2.3	2.8	1.8	2.6	2.8
VII	-	-	-	-0.6	-6.4	-1.2	-1.0	-5.6	-1.7
VIII	13.7	-0.3	-1.9	0.7	3.0	0.6	1.7	0.2	-0.5
X	-4.2	-7.0	-2.3	-3.6	-5.8	-2.0	-2.3	-1.9	-0.8
XI	-4.7	-2.9	-1.7	-3.8	-2.2	-1.0	-2.0	-0.5	-1.7
XII	-2.5	0.9	-0.3	-2.0	-0.1	-1.8	-1.3	-0.2	-1.1
XIII	-4.2	1.3	-2.1	1.1	0.7	-1.8	-0.5	1.1	1.1
XIV	-1.8	7.7	5.7	-2.2	0.8	0.8	-0.2	0.1	1.2
XV	2.3	4.6	2.2	2.1	2.6	0.5	2.4	2.2	1.1
XVI	5.2	5.2	0.7	0.6	1.2	1.2	2.0	2.5	3.3
T	-1.7	-1.1	0.1	-0.3	-0.5	0.4	0.7	0.8	1.1

KEY FOR TABLES 8.1 AND 8.2

S.I.C.	Standard Industrial Classification
III	Food, Drink & Tobacco
IV	Chemicals & Allied Industries
V	Metal Manufacture
VI, IX	Engineering & Electrical Goods and Metal Goods NES
VII	Shipbuilding and Marine Engineering
VIII	Vehicles
X	Textiles
XI	Leather, Leather Goods & Fur
XII	Clothing and Footwear
XIII	Bricks, Pottery, Glass, Cement
XIV	Timber, Furniture etc
XV	Paper, Printing and Publishing
XVI	Other Manufacturing Industry
T	Total Manufacturing

clothing and bricks and cement. Over the whole period textile industry employment has been declining at a rate of 4.6% per annum, but the decline was much faster in the period 1959-63 when the effects of the textile industry reorganisation were being felt, and has been rather slower since. Growth in the metalworking industries (Orders V to IX) has provided about 14,000 new jobs which partially balance the loss of 3[illegible],[illegible]00 jobs in textiles, and has been fastest when the decline in textiles was greatest. Total manufacturing employment has fallen roughly by the amount of jobs lost in textiles less the new jobs in metalworking industries, as the remainder of manufacturing industry has not shown any overall growth in employment.

8.3 Apart from the paper industry which is largely concentrated in one part of North East Lancashire, all the other industries in the area are very small by comparison with textiles, clothing and footwear and engineering and electrical goods. It is much more difficult to speak of trends in employment in the smaller industries as many of the major changes in the size of the labour force are the result of the opening or closing of a few plants. For instance, the major part of the change in employment in the Industrial Order XVI (other manufacturing industry) between 1953 and 1959, and between 1959 and 1963, was the result of the opening of a single new plant in each period. In general, however, it may be said that employment in food, drink and tobacco, chemicals, leather goods, and bricks, pottery, glass and cement is declining, while employment is rising in metal manufacture, vehicles, timber and furniture, and paper, printing and publishing.

The Blackburn Area

8.4 This Area is defined as the employment exchange areas of Accrington, Blackburn, Clitheroe, Darwen and Great Harwood. The employment figures for selected years between 1953 and 1966 are given in Table 8.3. Over the whole period from 1953 to 1966 the numbers employed in manufacturing have fallen by 8,500. The numbers employed in textiles have fallen by 16,500 and there has been some compensating growth in engineering and electrical goods, vehicles, paper and other manufacturing. The main trend since 1953 has therefore been a further diversification away from textiles. In contrast to the pre-war period when the coarse weaving towns of the Blackburn Area suffered much more contraction than the fine weaving and finishing towns of the Burnley Area, the post-1953 decline has been at roughly the same rate in both Areas. This decline in textile employment in the Blackburn Area was substantial enough to cause a fall in total manufacturing employment until 1963. After that date manufacturing

TABLE 8.3 NUMBERS EMPLOYED BY INDUSTRY IN THE BLACKBURN AREA 1953-66

S.I.C.		1953	1959	1963	1966
III	Food, Drink & Tobacco	4215	3079	3897	3858
IV	Chemicals & Allied industry	3062	3125	2935	3087
V	Metal Manufacture	511	490	609	588
VI	Engineering & Electrical goods	19903	18274	20425	22109
VIII	Vehicles	655	3352	3876	3401
IX	Metal Goods N.E.S.	1202	1267	1170	1448
X	Textiles	33695	25659	18517	17022
XI	Leather, Leather goods & Fur	358	432	406	419
XII	Clothing & Footwear	3218	2977	3507	3671
XIII	Bricks, Pottery, Glass, Cement	2303	2088	2202	2014
XIV	Timber, Furniture etc.	967	885	1266	1419
XV	Paper Printing & Publishing	4765	5505	6438	6536
XVI	Other Manufacturing Industry	610	1148	1246	1353
	Total Manufacturing Employment	75467	68181	66494	66925
	Total Employment	116856	110911	110983	113834

In Tables 8.3,8.4 and 8.5 figures for the years 1953, 1963 and 1966 are used because they represent comparable levels of economic activity.

TABLE 8.4 NUMBERS EMPLOYED BY INDUSTRY IN THE BURNLEY AREA 1953-66

S.I.C.		1953	1959	1963	1966
III	Food, Drink & Tobacco	1666	1109	1147	948
IV	Chemicals & Allied Industry	354	489	344	377
V	Metal Manufacture	685	806	720	862
VI	Engineering and Electrical goods	4757	7861	10903	11475
VIII	Vehicles	2442	3345	2738	2855
IX	Metal Goods N.E.S.	1250	2101	2059	2492
X	Textiles	36547	27005	20567	19314
XI	Leather, Leather Goods and Fur	765	416	361	324
XII	Clothing and Footwear	2188	1843	2230	2101
XIII	Bricks, Pottery, Cement, Glass	768	349	352	348
XIV	Timber, Furniture etc	745	745	1057	1348
XV	Paper, Printing and Publishing	1079	1153	1733	2280
XVI	Other Manufacturing Industry	760	913	1346	1162
	Total Manufacturing Employment	54006	48135	45557	45886
	Total Employment	83525	78854	77288	76415

TABLE 8.5 NUMBERS EMPLOYED BY INDUSTRY IN THE ROSSENDALE AREA 1953-66

S.I.C.		1953	1959	1963	1966
III	Food, Drink and Tobacco	594	413	456	514
IV	Chemicals and Allied Industry	24	262	403	78
V	Metal Manufacture	37	34	26	31
VI	Engineering and Electrical Goods	656	900	949	988
VIII	Vehicles	13	7	8	-
IX	Metal Goods N.E.S.	134	150	243	411
X	Textiles	11559	11214	9598	9137
XI	Leather, Leather goods etc	35	35	22	6
XII	Clothing and Footwear	7153	5982	5480	5353
XIII	Bricks, Pottery, Glass, Cement	104	40	55	89
XIV	Timber, Furniture etc	323	204	144	145
XV	Paper, Printing & Publishing	762	790	745	717
XVI	Other Manufacturing Industry	319	227	203	347
	Total Manufacturing Employment	21713	20258	18332	17816
	Total Employment	29227	27298	25517	24607

employment appears to have become stable, and growth in the non-manufacturing sector has resulted in a rise in total numbers employed.

The Burnley Area

8.5 This Area contains the employment exchanges of Burnley, Colne, Nelson and Padiham. The changes in the pattern of employment by industry since 1953 are shown in Table 8.4. Because the Burnley Area suffered less from the effects of the great depression and overseas competition than the Blackburn Area, the textile industry is relatively more important here, employing more people than the four metalworking industries (Orders V to IX). These industries have grown rapidly in the recent past, having more than doubled in numbers employed since 1953. Since 1963 their growth has roughly matched the decline in the numbers employed in textiles, leading to a stabilisation of manufacturing employment. In contrast to the Blackburn Area non-manufacturing employment has declined since 1963 so that the total numbers employed have fallen. The distribution of employment between industries is roughly the same in the Burnley and Blackburn Areas, with the major exception of textiles which employ 25% of the labour force, compared with 15% in the Blackburn Area. About 60% of the workforce in both Areas is employed in manufacturing, compared with 45.5% for the North West Region, and 38.1% for Great Britain.

The Rossendale Area

8.6 This Area contains the employment exchanges of Bacup, Haslingden and Rawtenstall. The numbers employed in each industry since 1953 are shown in Table 8.5. Unlike the Blackburn and Burnley Areas the position of the textile industry in Rossendale has been maintained since the war. This is partly because no new industries have moved into the Area, and partly because the integrated textile mills there are better able to withstand competition. Both the textile industry and footwear manufacture (the other traditional industry) have declined somewhat since 1953, and their decline almost exactly accounts for the fall in manufacturing employment since that date. Apart from the textile and footwear industries which together employed 59% of the labour force in 1966 no other industry provided more than 4% of employment. In Rossendale 72% of the workforce was employed in manufacturing industry in 1966. This is a much higher proportion than in the other Areas.

The Labour Force

8.7 Female activity rates have traditionally been high in North East Lancashire due to the dominance of the textile industry. As the textile industry has declined the women's share of employment in the industry has also declined, leading to a faster loss of

TABLE 8.6 THE PERCENTAGE OF WOMEN IN TOTAL EMPLOYMENT BY INDUSTRY IN NORTH EAST LANCASHIRE 1953-66

S.I.C.		1953	1959	1966
III	Food, Drink & Tobacco	39.3	30.1	35.2
IV	Chemicals & Allied Industry	23.4	27.1	26.9
V	Metal Manufacture	9.3	14.0	15.7
VI	Engineering & Electrical goods	24.5	30.8	32.1
VIII	Vehicles	13.7	13.1	16.9
IX	Metal Goods N.C.S.	32.1	33.8	35.1
X	Textiles	58.5	56.0	49.7
XI	Leather, Leather Goods & Fur	47.9	43.1	42.1
XII	Clothing & Footwear	67.5	67.1	69.6
XIII	Bricks, Pottery, Glass, Cement	9.3	10.2	13.9
XIV	Timber & Furniture	23.8	18.9	24.0
XV	Paper, Printing & Publishing	34.2	34.6	34.2
XVI	Other Manufacturing industry	35.1	44.6	34.3
	Blackburn Area	41.6	41.3	40.1
	Burnley Area	43.0	41.0	41.6
	Rossendale Area	43.0	44.5	44.3
	Total Manufacturing Industry	42.3	41.6	41.1

female than male employment, but there has been considerable compensating growth in female employment in the engineering industries which are often of a type that offers many jobs suitable for women. Table 8.6 shows the women's share of total employment in each industry in 1953, 1959 and 1966. The main points to be noticed in the table are that women workers are much more important in textiles, clothing and footwear than in other industries, and that the women's share of all manufacturing employment has been very stable in the recent past in all the Areas.

8.8 Variations between Areas within each industry are generally not important with the exception of the female share of employment in textiles, clothing and footwear in Rossendale being considerably below that in the other Areas. This possibility arises because of the predominance of these industries in the Area, and the lack of other opportunities for male employment. The female share of employment is stable in most industries except textiles where it is falling, and the metalworking industries (Orders V to IX) and bricks and cement where it is rising. North East Lancashire's traditionally high activity rates for females have been declining slowly in the recent past, mainly as a result of decline in the industries traditionally employing women. Growing industries in the subregion have tended to employ a growing share of women partly because of the supply of female labour, and partly because of the nature of their processes. As a consequence of these movements the women's share of all manufacturing employment has only declined very slowly, and it is likely to be above the national average for a very long period in the future.

8.9 Because of the past dependence on the textile industry only a limited range of skills have been available in North East Lancashire until quite recently. The bulk of growing employment in the subregion has been in the metalworking industries and the only skills suitable for these industries to be found until the postwar period were in the textile machinery industry and locomotive repair workshops. New firms moving into the subregion have generally had to import a nucleus of trained people and train the rest of the labour force locally. In some cases this has meant a year's work on training before a plant could go into operation. Frequently these training programmes have kept up sufficient momentum for the plants later to become net exporters of skills to parent organisations outside the subregion. This process has been encouraged by the fact that the satellite plants which have come to the subregion have generally had a below average share of the higher technical, research and administrative jobs available. One of the factors encouraging the growth of new industry in the subregion, in spite of the general shortage of skills, has been the availability of a supply of trainable labour, mainly from the textile industry. This situation now no longer persists, as many of the younger, more trainable people have already left the textile industry, and the textile industry itself is beginning to demand more skilled and adaptable people to work the more advanced types of machinery.

The Movement of Firms to North East Lancashire

8.10 Over a long period, from the textile slump of the 1930's and intermittently up to the present day, North East Lancashire has offered a ready supply of trainable labour to firms moving into the subregion. In the pre-war period this attracted very few firms as similar conditions prevailed in other parts of the country where labour was already trained in the skills needed by the expanding industries. Among the firms that did move in, the most important were an ordnance factory and a firm making kitchen equipment. In a sense these firms set the pattern for further movements into the subregion as they both carried out light engineering work, employed considerable numbers of women, and were prepared to train up a workforce rather than attract trained people away from other industries. During the Second World War the subregion became a dispersal area for strategic industries, and engineering and chemical firms moved in to use the supply of labour produced by the forced contraction of the textile industry. Some of the firms which arrived at this time stayed on after the war, and in at least two cases have become major employers.

8.11 Immediately following the Second World War, during the textile boom which lasted until 1951, few firms moved into the subregion because of the general labour shortage. Only two of the firms which moved in between 1945 and 1951 have become major employers and they now together employ about 3,000 people. One of these is a car component firm which foresaw the end of the textile boom and used imported labour until this came about, and the other was an aircraft firm which moved into the area as the textile boom was ending. This period was the time of building controls, and the availability of suitable existing factory buildings was an over-riding factor in attracting the few firms that came.

8.12 Since 1951 the pattern of movement to North East Lancashire has been strongly influenced by government regional policy. In March 1953 parts of the Burnley Area were declared part of a Development Area under the Distribution of Industry Act 1946. In addition, in 1958 this area and the employment exchange areas of Blackburn and Accrington were treated as Development Area Treasury Advisory Committee areas under the Distribution of Industry (Industrial Finance) Act of 1958, and the Treasury was empowered to make grants or loans to provide more work. These forms of assistance were backed up by a very liberal Industrial Development Certificate policy. In March 1960 the Local Employment Act 1960 came into force and assistance ceased. Simultaneously, Industrial Development Certificate policy became more restrictive and has only eased during the latter part of 1967. Development Area status for the Burnley district achieved some success. Ten firms moved into North East Lancashire from 1953 to 1960, and of these seven moved to the Burnley Area and employ at present about 4,600 people. But only three moved to the rest of North East Lancashire and these firms only employ about 1,000 people. The great preponderance of new employment created by movement of firms during the period of Development Area status was in new, purpose built factories, as opposed to the prior or succeeding periods when firms nearly always moved to vacant mill property.

8.13 Since the ending of Development Area status a large number of firms have moved into North East Lancashire, but most of them have been very small, the largest employing only about 300 people. During this period there have also been a significant number of moves out of the subregion and in round terms, a net loss of jobs. Only a part of this alteration in circumstances can be attributed to changes in Development Area and Industrial Development Certificate policy, and it is hard to avoid the conclusion that North East Lancashire has become less attractive to industry for other reasons as well. Table 8.7 shows an analysis of Industrial Development Certificates issued in the periods 1953-60 and 1960-86 by areas of floorspace and numbers employed. It can be seen that policy since 1960 has not by any means been entirely restrictive.

8.14 Apart from the grants and loans available during the period of Development Area status some of the success achieved in attracting new industry to the Burnley Area from 1953 to 1960 was due to the supply of trainable labour, and the fact that

Industrial Development Certificates and Development Area incentives were in short supply elsewhere. Since 1960 the subregion has been moving towards a labour shortage while Industrial Development Certificate policy has generally become less restrictive in the very large areas of the country which have become Development Areas. In these circumstances it can be seen why the flow of new industry slowed down during the 1960's. It seems unlikely that recent national changes in Industrial Development Certificate policy will alter the situation greatly and in view of the likely labour shortage in the subregion in future it seems probable that even Development Area status would not restore the subregions former attractiveness as a destination for moving firms.

The Present Position

METALWORKING

8.15 These industries comprise Industrial Orders V to IX, metal manufacture, vehicles, engineering and electrical goods, and metal goods not elsewhere specified. Shipbuilding and marine engineering is not represented in the subregion. Employment in these industries in the recent past is shown in Table 8.8, and their share of total employment in Table 8.9. The tables show that the largest number of new jobs (about 8,000) provided in the metalworking industries since 1953 have been in the Burnley Area whereas there have only been about 5,000 new jobs in the Blackburn Area, and 600 in Rossendale. The percentage of the total workforce in metalworking industries tends to overstate the amount of growth in the Burnley and Rossendale Areas as growth has started from a lower level and taken place against more rapidly falling total employment than in the Blackburn Area. Tables 8.1 and 8.2 show that growth in the different metalworking orders has been irregular since 1953. This is mainly because employment has been strongly affected by new firms coming into the subregion. For example, the high rate of growth for the vehicle industry

TABLE 8.7 INDUSTRIAL DEVELOPMENT CERTIFICATES ISSUED IN 1953-60 and 1961-66

	BURNLEY AREA			BLACKBURN AREA			ROSSENDALE AREA		
	No.	Floor Area	* Employed	No.	Floor Area	* Employed	No.	Floor Area	* Employed
1953-60	39	2,108	6,171	71	1,344	1,863	21	387	472
1961-66	20	717	2,673	57	1,376	1,409	14	184	358

Area = Area '000 ft.^{2}

* Estimated additional employment

TABLE 8.8. EMPLOYMENT IN THE METALWORKING INDUSTRIES IN NORTH EAST LANCASHIRE 1953-66

	1953	1959	1963	1966
Blackburn Area	22,271	23,383	26,077	27,546
Burnley Area	9,134	14,113	16,420	17,684
Rossendale Area	840	1,091	1,226	1,430
Total - North East Lancashire	32,245	38,587	43,723	46,660

TABLE 8.9 EMPLOYMENT IN THE METALWORKING INDUSTRIES AS A PERCENTAGE OF TOTAL EMPLOYMENT IN NORTH EAST LANCASHIRE

	1953	1959	1963	1966
Blackburn Area	19.1%	21.1%	23.5%	24.2%
Burnley Area	10.9%	17.9%	21.2%	23.1%
Rossendale Area	2.9%	4.0%	4.8%	5.8%
Total North East Lancashire	14.0%	17.8%	20.5%	21.7%

between 1953 and 1959 was largely the result of the movement of a single firm. Within the whole group of industries growth has been much more regular but has been faster at times of particular decline in textiles.

8.16 North East Lancashire contains firms that can carry out a wide variety of processes in engineering and the manufacture of electrical equipment. There is an almost complete absence of heavy industry in the form of smelting and the manufacture of heavy industrial plant and steelwork. Most of the activity is in the general light engineering field in such activities as diecasting, light presswork, sheet metal-work, welding, machining, light metal fabrication, metal spinning, plating and painting, The electrical and electronic firms in the subregion carry out such activities as glasswork, the manufacture of non-metal parts, precision metal assembly work, and electrical wiring, amongst many others. Engineering work of a rather heavier kind is done by the textile and mining machinery firms in the subregion.

8.17 Metalworking is also characterised by the concentration of activity into a fairly small number of sectors (Table 8.10) There is also a high degree of concentration into large units. Of the 33,000 people employed in the major activities listed in Table 8.10, two-thirds worked in only ten plants, and in each of the activities, apart from metal industries not elsewhere specified, at least half of the employment was represented by one or two firms. It is interesting to note that the traditional engineering activity of manufacturing textile machinery is still the most important in North East Lancashire, and that all the activities mentioned were present in the subregion in 1945 Apart from the main industries mentioned above there are numbers of firms making such products as mining equipment, commercial vehicle chassis, tractors, electrical harnesses, laundry equipment, and gas water heaters, and about thirty firms which offer sub-contracting facilities in the engineering field.

8.18 In North East Lancashire about a quarter of all employment in metalworking is in firms directly supplying the consumer market, about a third is in the manufacture of capital equipment and the remainder is in the manufacture of components. The firms selling to the consumer market sell their products nationally and in most cases only about one per cent of their sales are in North East Lancashire itself. The bulk of employment in capital goods industries is in textile machinery. Here there are strong traditional links with the local textile industry but the larger firms, which comprise over half of the employment in textile machinery, sell a large part of their output abroad, and relatively little in North East Lancashire. The main local linkage in this

TABLE 8.10 EMPLOYMENT IN NORTH EAST LANCASHIRE WITHIN INDUSTRIAL ORDERS V TO IX BY ACTIVITY IN 1966

MAJOR ACTIVITIES	
Textile Machinery	8,000
Radio and other electronic apparatus	6,250
Ordnance and small arms	3,000
Domestic Electrical Appliances	2,650
Other electrical goods (nearly all automotive)	3,850
Aircraft parts	5,450
Metal industries N.E.S. (mainly kitchen tools and holloware)	4,150
Total Major Activities	33,350
MINOR ACTIVITIES	
Metal manufacture (mainly castings)	1,480
Other machinery	5,650
Other activities	6,180
Total Minor Activities	13,310
Total Employment	46,660

sector is in fact among the small firms supplying loom parts to the local textile firms. In the component supplying part of the engineering industry there are some local linkages, for example, local firms supply gearboxes, taps and water seals for washing machines, but these are relatively unimportant. All of the electronic components, ordnance and automotive equipment goes outside the subregion for final assembly, with the exception that precision metal assemblies for television picture tubes are exchanged between plants in the subregion. Linkages with Central Lancashire are generally of a low order of importance, except in the case of the aircraft industry where a plant in North East Lancashire supplies parts to Central Lancashire, and in the case of the automotive electrical industry where the same kind of interchange takes place. It was the general feeling of firms in the engineering sector that local growth in Central or North East Lancashire would not lead to important second round effects, and that if there were such effects they would probably be no greater than if the growth had taken place in another part of the country. There is not at present a strong basis of support services in the subregion and firms tend to internalise these services or go outside the subregion for them. Nearly all of the raw materials and capital equipment for engineering firms also comes from outside.

8.19 Growth in the markets for engineering products manufactured in the subregion is most likely to come from increased spending on household goods and cars but could also come from an increase in the demand for aircraft parts, electronic goods and quite a wide range of other products for which North East Lancashire makes components. Many of the firms in this sector which were interviewed were pessimistic about the prospects of growth within their present markets. For instance, it seems very unlikely that the rate of growth in demand for aircraft parts, car components, household durables, and television picture tubes will be as great in the future as it has been in the recent past. Many of the firms felt that a policy of diversification would ensure growth and had either tried this course or had some definite plans for it. In many cases it will be easier for these firms to diversify because they already carry on a wide range of activities at one site. In some cases the diversification could take the form of providing support services or components for new industries - if growth occurred in Central Lancashire and it is probable that linkages developed by North East Lancashire firms through diversification would be more important in this case than present exchanges of intermediate goods, or potential demands on existing subcontracting firms in North East Lancashire.

8.20 The greater part of engineering activity in North East Lancashire is not indigenous in origin. The traditional engineering activity of making textile machinery has not become diversified to any great extent, although a new form of textile machinery, tufting machinery, is now made in the subregion, and one of the textile machinery firms now makes tractors. Outside the textile machinery field only one of the large engineering employers in the area is a purely local firm. Engineering firms which have come into the subregion have typically been branches of large United Kingdom or overseas firms, although in the recent past there has been an influx of much smaller less well known firms. Of the reasons for moving to the subregion given by firms

TABLE 8.11 A. PERCENTAGE SHARE OF THE TEXTILE INDUSTRY IN TOTAL EMPLOYMENT 1953-66

	1953	1959	1963	1966
Blackburn Area	28.8	23.0	16.7	15.0
Burnley Area	43.8	34.2	26.6	25.3
Rossendale Area	39.5	41.1	37.6	37.1
Total North East Lancashire	35.6	29.4	22.8	21.2

B. NUMBERS EMPLOYED IN THE TEXTILE INDUSTRY 1953-66.

	1953	1959	1963	1966
Blackburn Area	33,695	25,559	18,517	17,022
Burnley Area	36,547	27,005	20,567	19,314
Rossendale Area	11,559	11,214	9,598	9,137
Total North East Lancashire	81,801	63,778	48,682	45,473

three stand out before all others in importance. These are -

a) A supply of trainable labour with a good record of labour discipline.
b) The availability of sites and buildings with services laid on, or a rapid grant of an Industrial Development Certificate.
c) Loans, Grants, or more general encouragement from the Board of Trade.

Firms have not necessarily been attracted by the generally lower rates of pay in North East Lancashire, nor, except in a few cases, by any specifically trained supply of labour. When the movement of engineering to the subregion began in the pre-war period the only available supply of suitable skills was among a very small nucleus of locomotive fitters and textile machinery workers and, though quite a number of people in the subregion gained experience in engineering skills during the war, it is still true to say that new firms have done nearly all their own training, and in quite a few cases have become net exporters of skilled people. Some of the firms moving in came more specifically because of the supply of female labour from the textile industry which was adaptable and nimble-fingered, a great advantage in electronics and light assembly work.

8.21 The question of the availability of Industrial Development Certificates and Development Area policy was dealt with in Paragraphs 12 to 14, but it is worthwhile pointing out in passing that the stock of mill buildings available is probably more attractive to the smaller engineering employers, and the larger employers have generally found it necessary to build to their own requirements. Few of the engineering employers in North East Lancashire said that they found communications a problem as most of the products are fairly small and light. Firms in the motor components industry find that the area is quite well placed to supply Central Scotland, Merseyside and the Midlands, and firms supplying the consumer market find that North East Lancashire is quite a good position for distributing goods over at least the northern half of England.

TEXTILES

8.22 In spite of a long period of decline the textile industry is still the largest employer of labour in North East Lancashire, providing 35% of all manufacturing employment and 21% of total employment. Table 8.11 shows the share of the textile industry in total employment in each of the three Areas over the period 1953-66. The dependence of the subregion on textiles has been substantially reduced over the recent past in the case of the Blackburn and Burnley Areas, whereas in Rossendale

TABLE 8.12 EMPLOYMENT BY ACTIVITY WITHIN THE TEXTILE INDUSTRY

	1959	%	1963	%	1966	%
Weaving	46,143	72.3	33,002	67.8	28,859	63.5
Spinning	7,906	12.4	6,009	12.3	6,421	14.1
Finishing	4,486	7.0	4,000	8.2	3,470	7.6
Other	5,243	8.3	5,671	11.7	6,723	14.8
Total Textile Employment	63,778	100.0	48,682	100.0	45,473	100.0

TABLE 8.13 OUTPUT OF WOVEN COTTON & MAN-MADE FIBRE TEXTILES IN NORTH EAST LANCASHIRE 1953-66

Million Linear Yards	1953	%	1959	%	1963	%	1966	%
Blackburn Area	529.5	20.1	377.9	19.6	215.3	13.7	192.4	12.6
Burnley Area	695.1	26.4	516.4	26.8	465.9	29.6	444.2	29.0
Rossendale Area	94.9	3.6	79.6	3.9	61.3	3.9	59.0	3.8
Total North East Lancashire	1319.5	50.1	974.1	50.3	742.5	47.2	695.6	45.4
Total United Kingdom	2632.2	100.0	1927.1	100.0	1574.4	100.0	1531.9	100.0

TABLE 8.14 SPINNING OUTPUT IN NORTH EAST LANCASHIRE AND THE UNITED KINGDOM 1953-66

('000 lbs.)	1953	%	1959	%	1963	%	1966	%
North East Lancashire	41,063	4.9	44,625	6.8	30,805	6.0	33,099	6.7
United Kingdom Total	844,149	100	657,604	100	515,542	100	495,248	100

TABLE 8.15 PRODUCTION, NET EXPORTS AND APPARENT HOME CONSUMPTION OF COTTON AND MAN-MADE FIBRE TEXTILES

Million Linear Yards WOVEN COTTON FABRICS	1953	1959	1963	1966
Production	1864	1337	1014	915
Add Imports	104	564	668	616
	1968	1901	1682	1531
Deduct Exports	745	360	216	160
Apparent Consumption	1223	1541	1466	1371
MAN-MADE FIBRE FABRICS & MIXTURES				
Production	769	590	560	617
Add Imports	46	40	67	98
	815	630	627	715
Deduct Exports	186	67	84	68
Apparent Consumption	629	563	543	647
Total Apparent Fabric Consumption	1852	2104	2009	2018

the share of textiles in total employment has remained almost the same. The workforce is, however, much smaller in Rossendale than in the other Areas and textile employment there represents only about half the numbers employed in the Blackburn and Burnley Areas respectively (Table 8.11)

8.23 Of the total textile labour force in the subregion in 1966, 63% were employed in weaving cotton and man-made fibres, and 14% were employed in spinning these materials. About 8% of the labour force was in textile finishing, and the remaining 15% were spread over all the other textile activities with the exception of man-made fibre production and lace-making which are not represented in the area. The traditional activity of weaving is thus of the greatest importance to the subregion. In 1966 there were 166 weaving units, compared with 37 spinning units. Both types of unit had an average size of 174 employees. Table 8.12 shows that weaving has been the activity which has contributed most to the decline in textile employment in the area. Part of this has been due to a decline in the weaving industry and part results from a net movement of weaving away from North East Lancashire

8.24 Figures for the output of woven cotton and man-made fibres are given in Table 8.13 which shows that weaving is declining more rapidly in North East Lancashire than elsewhere. This is partly the result of more rapid decline among firms in the area, and partly the result of decisions to move activity out of the subregion, in particular to Skelmersdale and Cumberland. The whole of the relative decline is concentrated in the Blackburn Area.

8.25 Spinning and doubling and finishing are less important in the subregion in relation to the national economy than weaving. The study area provides only 6% of Great Britain's employment in these activities compared with 32% of Great Britain's weaving employment. Output in spinning and doubling has been declining more slowly in the study area than it has nationally as Table 8.14 shows. No figures are available for finishing, but it is likely that the same trends hold true for this activity.

8.26 Table 8.15 shows production, net exports and apparent home consumption of cotton and man-made fibre textiles for the United Kingdom over the period 1953-1966. The main trend over the recent past has been a slight growth of home consumption, rapidly growing imports and declining exports. Apparent home consumption appears to have fallen over the period 1959-1966 but this is probably the result of an increase in imports of made-up clothing which does not appear in these figures. In the first nine months of 1967 the United Kingdom imported cotton and man-made fibre cloth worth about £59 million. Of the total yardage imported 68% was gray cotton cloth, 20% was finished cotton cloth and 12% was man-made fibre cloth. About 70% of the gray cloth and about 37% of the finished cotton cloth came from India, Hong-Kong, Pakistan and Portugal, the main low cost producers. Most of the man-made fibre cloth came from European countries. At the same time the United Kingdom imported £16 million worth of cotton and man-made fibre yarns, and £61 million worth of clothing from which it is not possible to separate the cotton and man-made fibre content. As Table 8.15 shows the share of imports in the home market for woven fabrics has generally been growing rapidly. Government policy now is to regulate the imports of cloth from low cost producers by agreements with the governments concerned. In the future this should mean that the share of these countries in the United Kingdom market remains roughly constant. However, in the field of finished cotton cloth and man-made fibre cloth these countries are not, with the exception of Hong-Kong, major suppliers. The home textile industry, in fact, faces much more competition from European producers, and here there is no acceptable mechanism at the moment for limiting imports. The recent devaluation of the pound should give a period of respite from competition from both the low cost producers, with the exception of Hong-Kong, and the European producers. This may not be permanent and future trends in imports may possibly depend on how well the respite is used to increase Lancashire's competitiveness.

8.27 North East Lancashire has been a centre of the textile industry for more than a century and the textile tradition is counted as a great advantage by firms in the subregion. This manifests itself not only in a local market for the intermediate products of the industry and ancillary services such as the supply of chemicals and loom parts, but also in what one firm called the 'textile mindedness' of the workforce. In the minds of textile employers the disadvantages imposed on the industry by government policy on imports heavily outweigh any local disadvantages. Nevertheless, the textile industry suffers from occasional labour shortages and wage competition from other industries and finds it difficult to get young recruits in the subregion. A great deal of plant is out of date, and for the large nationally based firms who wish to re-equip in order to compete with low cost imports, and have to spend large sums to do so, North East Lancashire is not attractive compared to Development Areas. None of these firms, incidentally, has their headquarters in the subregion. A very large percentage of the firms surveyed felt that they were in a precarious position financially due to competition, and several were ready to close down. Increasingly, North East Lancashire firms that have not managed to begin re-equipping are either being driven into specialised markets or becoming unprofitable. In the future it is therefore likely that weaving will continue to migrate from the subregion leaving behind more specialised activities which are not so exposed to overseas competition.

CLOTHING AND FOOTWEAR

8.28 The clothing and footwear industries represent about 5% of all employment in North East Lancashire, and have provided a constant proportion of employment over the whole period from 1953-1966 in each of the Areas (Table 8.16). Table 8.17 shows that these industries are more important as employers in Rossendale than in the other Areas. It is apparent from this that employment in these two industries in the Burnley and Blackburn Areas has been fairly stable or slightly growing since 1953 whereas employment in Rossendale has been falling This is because of the much greater importance in Rossendale of the footwear industry, which has been declining in employment terms.

8.29 Footwear production in North East Lancashire has been fairly static in the recent past, at a level of about 23 million pairs, which represents approximately 10% of United Kingdom production. Production was lower in 1966 than in 1963, but this was probably a result of temporary economic fluctuations. Slippers form more than 40% of total output in the area, and many of the manufacturers work on a system of balanced production, making slippers for half the year, and leather footwear for the other half. No output figures are available for the clothing industry in North East Lancashire, but as employment has risen over the period 1959-66 output has plainly done so too. Over half the employment in clothing is in the production of dresses, lingerie and children's wear. There is also a considerable amount of employment in very specialised fields such as protective clothing.

8.30 Exports at under 2% of total output, form a negligible part of the market for North East Lancashire footwear firms. Imports of footwear into the United Kingdom market have been growing in the recent past, and within this growth the share of low cost producers has become greater. The present annual level of imports is about 45 million pairs of which 26 million are of rubber, textiles and plastic, 6 millions are slippers and 13 millions are of leather. About three-quarters of the rubber, plastic and textile footwear and the slippers come from Hong-Kong, but only about 10% of the leather shoes come from this source. The main source of leather footwear is Italy. Rubber, textile and plastic footwear is fairly unimportant in North East Lancashire and representatives of the footwear industry feel that the greater threat from imports is in the slipper market. In all about half of North East Lancashire output is vulnerable to low cost competition. This could possibly be met by a move towards the higher quality end of the market, or into more leather footwear. Clothing imports, particularly from low cost producing areas, have been rising in recent years. North East Lancashire's clothing industry is clearly vulnerable to this competition in some areas, but two factors may mitigate this. One is that there is a considerable amount of specialisation in the subregion, and the other is that quite a lot of the employment is in supplying specific clothing outlets, with the intimate control of quality and design that this implies.

8.31 Both the firms interviewed and the representatives of the footwear industry felt that the main advantage of North East Lancashire was a supply of female labour. The industry is generally very labour intensive and in the most important process 'closing', there is no substitute for the nimble-fingered woman worker. Advances in productivity have been made in some of the processes in recent years, but in closing no changes in productivity are foreseeable, and the demand for female labour will probably continue at a high level for many years to come. The industry has recently experienced a shortage of female labour in North East Lancashire, and firms said this was the reason for a movement to the coastal plain, with a consequent fall of employment in North East Lancashire. In addition, overall demand for labour has been falling to some extent in the recent past due to improvements in productivity

8.32 Although the footwear industry might not appear to be tied to the subregion it is heavily orientated towards its labour supply. North East Lancashire firms have a very high percentage of skilled operative and employees are generally of long service. It is therefore unlikely to move its base away from the subregion, even though specific activities have spread out of the area as a consequence of labour shortages. North East Lancashire units are generally of similar size to those elsewhere, and rationalising into fewer larger units within groups or by amalgamations would probably not yield great improvements in productivity in the near future. Rationalisation is therefore not likely to be a force which will immediately reduce the size of the industry, though in the longer term the small size of North East Lancashire as a footwear centre will probably be an increasing handicap. The clothing industry, which uses a much smaller range of skills than footwear, is much more footloose. Quite a large part of the industry is in the hands of nationally based companies, and a shortage of female labour could lead to movement of some of the industry elsewhere.

PAPER, PRINTING AND PUBLISHING

8.33 Table 8.18 shows employment in the paper, printing and publishing industries in North East Lancashire in the recent past. The industry in North East Lancashire can be split into two main parts. One is the local newspaper and jobbing printing industry which can be found in any community, and the other is the paper-making and wallpaper industry which has grown up over a long period in North East Lancashire, and was originally established because of supplies of pure water and rags.

8.34 It is to be expected that the fortunes of the local printing industry and newspaper publishing will always be closely linked to that of the subregion as a whole, as it has been in the past. Radical changes in productivity through the introduction of new methods are unlikely and the industry is unlikely to show a net movement into or out of the subregion. The paper-making industry and the associated wallpaper printing industry, having grown up for reasons which have become unimportant as the nature of the process has changed, are now no longer ideally located in North East Lancashire. In particular, firms feel that the carrying of woodpulp from ports adds to costs by comparison with more favourable locations. The industry uses very few skilled people, but nevertheless increasingly experiences the effects of local labour shortages. It is at present in a state of reorganisation. The market is fairly static and can most appropriately be supplied by a smaller number of papermills working on a shift system. This form of reorganisation has benefited North East Lancashire partly because the mills were adaptable to increased working, partly because a labour force to work on shifts was available, and partly because the industry in the subregion was integrated with other processes. On balance, it seems likely that these advantages relative to the rest of the country will continue, but they are more likely to mean stabilisation of the present position than growth.

FOOD AND DRINK

8.35 Employment in the food and drink industries in North East Lancashire in the recent past is shown in Table 8.19. The main food and drink industries in the subregion are baking and brewing, but there are numbers of small plants making milk products, pies,

TABLE 8.16 PERCENTAGE SHARE OF THE CLOTHING & FOOTWEAR INDUSTRY IN TOTAL EMPLOYMENT

	1953	1959	1963	1966
Blackburn Area	2.8	2.7	3.2	3.2
Burnley Area	2.6	2.3	2.9	2.7
Rossendale Area	24.5	21.9	21.5	21.8
Total North East Lancashire	5.5	5.0	5.2	5.2

TABLE 8.17 NUMBERS EMPLOYED IN THE CLOTHING & FOOTWEAR INDUSTRY

	1953	1959	1963	1966
Blackburn Area	3218	2977	3507	3671
Burnley Area	2188	1843	2230	2101
Rossendale Area	7153	5982	5480	5353
Total North East Lancashire	12559	10802	11217	11125

TABLE 8.18 EMPLOYMENT IN PAPER, PRINTING AND PUBLISHING

	1959	1963	1966
Blackburn Area	5505	6438	6536
Burnley Area	1153	1733	2280
Rossendale Area	790	745	717
Total North East Lancashire	7448	8916	9533

pickles, crisps, soft drinks and confectionery. The industry is in the subregion mainly for historic reasons, or because it serves a local market. There is no simple pattern in the distribution of the industry with the exception that the brewing industry is mainly concentrated in Blackburn which is very well placed to supply a regional market. This accounts for the greater importance of the food and drink industry as an employer in the Blackburn Area. Being a heavily market orientated industry it is unlikely that the food and drink industry will move into or out of North East Lancashire on a large scale. The main exception to this rule is brewing which is an unattractive industry to workers and finds the attraction of labour very difficult in conditions of labour shortage. Firms in the subregion feel that they might be driven to leave if labour shortages worsen, particularly if movement could bring the advantages of a more fully automated plant by amalgamation with a firm outside the study area.

CHEMICALS

8.36 Most of the employment in the chemical industry in North East Lancashire is in three large units in the Blackburn Area, one making paints, another catalysts, and the third plastics. In addition, there are a number of small firms making paints, plastics, bleaches and dyes for the textile industry, and pharmaceutical products. Employment in the industry in the recent past is shown in Table 8.20. About a quarter of the labour force in chemicals is female, and within the industry scientists, technologists and technicians make up nearly 8% of the labour force, a much higher percentage than in any other industry in the study area. Of the various activities within the chemical industry the manufacture of paint and chemicals for the textile industry have grown up locally, and most of the other activities have moved into the subregion. The largest plastics firm arrived as a result of wartime dispersal. Linkages with the surrounding area are slight. There is a strong local market in industrial finishes for paint firms and, in addition, the paint industry provides materials for firms making wall coverings, but neither of these markets is very important. The main local linkage is probably in the sale of chemicals to the textile industry, but this itself is not important compared with the volume of sales to markets outside the subregion. Nearly all raw material purchases originate outside the subregion. Most of the chemical industry in North East Lancashire is there for historic reasons. Although for most of the firms the original advantages no longer exist, they remain largely from inertia and also because there has been a ready supply of general labour until recently, and this has offset the disadvantage that it is difficult to attract technical personnel to the subregion.

REMAINING MANUFACTURING INDUSTRY

8.37 The industries not covered by the preceding sections include leather, leather goods and fur, bricks, pottery, glass, cement, timber and furniture and a number of miscellaneous industries of which the most important is plastics and rubber moulding. Employment in these industries in the recent past is shown in Table 8.21. Nearly all the employment in leather, leather goods and fur is in tanning to supply the local footwear and leather goods industry, and is concentrated in Blackburn, Colne and Great Harwood. The industry is very small and will probably remain at approximately the present size. The brick industry is largely concentrated in two plants in Accrington and Darwen, and there is a cement plant at Clitheroe, and a number of small units making other building materials scattered around the subregion. The industry is strongly dependent on local demand due to the high cost of transport and the presence of local minerals. The labour force is largely concentrated in the lower skills. The industry is unlikely to show any net movement in or out of the area. The timber and furniture industry is again predominantly a local industry, but one or two outside firms have been attracted into the subregion in recent years as a result of the availability of cheap mill buildings, for the industry requires a great deal of storage space. A large part of the industry is probably locally dependent and the growth of the sector which is supplying a wider market will depend partly on the availability of suitable buildings.

8.38 The remaining industrial category mainly comprises firms making tyres and other mouldings in rubber and plastics. Most of the output from this goes to the vehicle industry or for direct replacement purposes, and linkages are mainly national rather than subregional. The industry has arrived in the subregion only recently and depends on a supply of fairly unskilled labour willing to undertake the heavy, dirty and slightly dangerous work. It is very probable that with a favourable Industrial Development Certificate policy this industry would have expanded to something like twice its present size since its arrival. Any further movement of the industry will depend on the supply of labour. At present a small expansion is under way.

PRIMARY INDUSTRY

8.39 The primary industries in North East Lancashire consist almost entirely of agriculture and horticulture, coal mining and quarrying. Employment in these activities in the recent past is given in Table 8.22. Nearly all the agricultural employment in North East Lancashire is in the Blackburn and Burnley Areas. Quarrying is concentrated in the Blackburn Area, and coal mining is most important in the

TABLE 8.19 EMPLOYMENT IN FOOD AND DRINK 1959-66

	1959	1963	1966
Blackburn Area	3079	3897	3858
Burnley Area	1109	1147	948
Rossendale Area	413	456	514
Total North East Lancashire	4601	5500	5320

TABLE 8.20 EMPLOYMENT IN THE CHEMICAL INDUSTRY 1953-66

	1953	1959	1963	1966
Blackburn Area	3062	3125	2935	3087
Burnley Area	354	489	344	377
Rossendale Area	24	262	403	78
Total North East Lancashire	3440	3876	3682	3542

TABLE 8.21 EMPLOYMENT IN REMAINING MANUFACTURING INDUSTRIES 1959-66

	1959	1963	1966
Leather, Leather Goods and Fur	883	789	749
Bricks, Pottery, Glass, Cement	2477	2609	2451
Timber and Furniture	1834	2467	2912
Other Manufacturing Industry	2288	2795	2862
Total North East Lancashire	7482	8661	8974

TABLE 8.22 EMPLOYMENT IN PRIMARY INDUSTRIES

	1953	1959	1963	1966
Agriculture & Horticulture	1987	1581	1586	1408
Coal Mining	4540	4963	3579	2943
Stone and Slate Quarrying	523	313	296	255
Total	7050	6857	5461	4606

Burnley Area, although it is represented to some degree in all three. In the past agricultural employment has been declining in North East Lancashire at a little below the national rate. This trend is expected to continue in the future. Employment in coal mining has declined quite rapidly since 1953, only six of the nineteen pits in operation in that year being open in 1967. Only two of the pits are forecast by the National Coal Board to have a definite life after 1970, and these at present employ 730 people. In view of the nation-wide contraction in the coal industry and the concentration of activity into fewer and larger long-life pits it seems very probable that coal mining in North East Lancashire will cease during the 1970's. Quarrying has been a contracting activity in the recent past and this contraction will probably continue in the future, but as much of the demand for the product is local the activity is unlikely to die out in the foreseeable future.

Future Manufacturing Employment

8.40 As regards Government incentives to industry, our terms of reference state - "In considering the problems of movement of industry to the proposed development the consultants should base their study on existing Government policies, i.e., that there are no special incentives proposed for the new town of the kind normally associated with development areas. They should note further that the Government have set up a Committee under the Chairmanship of Sir Joseph Hunt with the following terms of reference -

'To examine in relation to the economic welfare of the country as a whole and the needs of the Development Areas, the situation in other areas where the rate of economic growth gives cause (or may give cause) for concern, and to suggest whether revised policies to influence economic growth in such areas are desirable and, if so, what measures should be adopted.'

In addition, the consultants should note that in a letter to local authorities of 16th May, 1967, about loan sanctions to local authorities for expenditure on industrial development the Ministry said that regard would be had to the existence of special needs in particular places outside the development areas, including places where planned expansion or re-location is taking place."

8.41 In accordance with this, we have taken a neutral assumption, both here and later in Part Five where the probable impact of a new town to the west of the study area is examined. In looking forward at what might happen over the next 25 years, one would certainly not expect that the exact forms of Government assistance and restraint of industry would remain unchanged, either as regards their They have, after all, changed many times in the last 25 years. However, this does not in our view make it impossible to forecast the general trend of industrial development in an area over the longer term. Our approach has been to examine the structure of industry in the study area looking at plants, skills, specialisations, economies of scale, adaptability, organisational and marketing aspects, quite as much as formal product groups or industrial classifications into which the activities fall, and from this basis we have tried to assess its prospects in the light of anticipated national changes in industry and the potential of the subregion in these future conditions. This approach really presupposes that future governments will control the movement of industry by taking account of regional needs and adjusting to economic and industrial potentials, rather than applying any fixed set of incentives. In other words, they would give the requisite assistance for the ends in view, whether in the form of industrial location grants or in any other desirable direction.

8.42 There are two basic methods of predicting future manufacturing employment in North East Lancashire. Both methods, when extended 25 years ahead, are increasingly prone to error. One is to project forward the past trends for each of the industries in the subregion. The other is to apply to the local situation, forecasts which have been made for the development of industry in the country as a whole. The former method is particularly unreliable in the case of North East Lancashire, because past trends have been much influenced by the movement of firms, and the causes of movement have changed greatly in recent years. We have therefore chosen the second method, recognising that it requires caution for three reasons. Firstly, most national forecasts have been coloured by optimism. Secondly, little serious work has been done on national forecasting so far ahead. Thirdly, national forecasts take no account of the special local circumstances of particular areas. We therefore took shorter term forecasts and checked them against the views of local firms and organisations as a basis for longer term predictions, and so sought to remedy these defects by knowledge of local industry gained by survey. Firms employing some 25% of manufacturing workers were interviewed and firms employing about 20% of the labour force replied to the questionnaire set out in Appendix D. In certain cases, where important plants were parts of national organisations, these organisations were asked how their overall strategy affected North East Lancashire. Our views on future employment also took into account forecasts of the numbers of people likely to be in the working age groups. In particular, we have allowed for the anticipated shortage of labour which may well develop in the subregion during the

70's, and the probable effects on the rates of growth and decline of certain sectors. Our broad conclusions follow about the future of the industries in the subregion.

The Growing Industries

METALWORKING

8.43 We have seen that this group of industries has provided a substantial part of the additional employment in manufacturing industry in recent years. The industry is characterised in North East Lancashire by the concentration of employment into a small number of large plants, many of which are branches of major firms with good growth records, both locally and nationally. Such plants may occasionally suffer in times of economic contraction, but this tendency is countered to a degree by a growing local autonomy in a number of cases in the study area. Certain activities, notably the manufacture of textile machinery and aircraft parts, have suffered recent setbacks. These resulted from a very sudden loss of markets and the decline in employment can probably be corrected in the longer term by a vigorous policy of diversification into more generalised forms of engineering. Indeed, throughout the subregion, the emphasis in the industry is on various forms of light engineering, electrical and precision work providing the basis for flexibility and adaptability in the face of the changing demands of technology.

8.44 Assuming present Government policy to be unchanged and after an examination of the recent movement of firms, we have assumed that there will be no substantial net movement either into or out of the Area in the forecast period up to 1981. We feel, on balance, that the metalworking firms in the Area should, in view of their size and flexibility and their plans for diversification and expansion, be able to share in the growth which is expected to occur in this sector in the country as a whole. They are unlikely to be severely hampered by the relative shortage of labour which may develop in North East Lancashire over the next 15 years, since the value of net output per employee is very much greater than in the main industries with which they will have to compete for labour.

OTHER MANUFACTURING INDUSTRY

8.45 In North East Lancashire, this Industrial Order consists mainly of firms making rubber products and plastic mouldings. Over half the subregional employment in the industry is in two firms which make components for the automotive industry. Since the products are generally of a consumable kind, with a consequent replacement demand, and one of the firms also makes parts for a wide range of other industries, sales of the products of this sector are likely to rise quite steadily in the future, even when the growth in demand for motor components slackens. The industry is characterised by a high rate of growth in productivity. For example, one firm is planning to double output over the next few years with only a 10% increase in the labour force. Consequently, demand for labour is not expected to rise very sharply, and it has been forecast to grow at about the same rate as demand from the metalworking industries.

FURNITURE AND TIMBER

8.46 The furniture industry and shop and office fitting, which represent most of the employment in this Order, are not growing industries nationally, but the firms in North East Lancashire have enjoyed steady growth in the past and this is expected to continue in the future. Productivity in these industries is unlikely to grow as fast as output, and we therefore expect that the labour force will grow, although the number of additional jobs created will be small.

The Declining Industries

TEXTILES

8.47 A decline in textile employment has been a long standing feature of North East Lancashire. In the past this has resulted from a decline in the demand for home produced cotton textiles, and to some extent from increases in productivity in the cotton industry. The industry has generally declined at a faster rate in North East Lancashire than in the rest of the country, and there has also been some tendency for firms to transfer production to works in other areas. These trends may be expected to continue into the future and other important factors are also now discussed.

8.48 The techniques of production in spinning and weaving are undergoing considerable change. The possibilities of dispensing with entire processes in textile production are being investigated. Other forms of cloth manufacture, for instance warp knitting, may make increasing inroads into the markets traditionally associated with woven materials. The weaving process itself may change with the development of shuttleless looms. In short, the outlook is a highly uncertain one, but it may be fairly said that there is the increasing prospect of a much more rapid improvement in productivity per worker than has been evident in the recent past. North East Lancashire, under present circumstances, is unlikely to be the scene of these changes since the new capital intensive projects of extension and development are more likely to go forward at the large modern works, situated in other areas, where such methods have already been introduced. In consequence, we expect growth in productivity to be slightly slower in North East Lancashire than elsewhere.

8.49 North East Lancashire is likely to suffer from a shortage of labour during the next fifteen years. The main effect of this shortage will almost certainly be felt by the textile industry, since firms will find it difficult to compete for labour by increasing the rates of pay they offer. The value of net output per worker in the great majority of the coarse weaving and spinning firms who provided us with information was less than £1,100 per annum. This sum must cover wages, depreciation and profits. Moreover, in a large number of firms figures for depreciation were low and the proportion of labour costs to total costs disproportionately high. In such a situation any further increase in wages, unmatched by additional revenue, would present extreme difficulty. There have, indeed, been several recent cases of closure, in which the firms' inability to recruit sufficient labour at the rates of pay they were able to afford, has played some part. Many firms also complained of their difficulty in recruiting workers at their present rates.

8.50 As a consequence of these factors the numbers employed in the textile industry in North East Lancashire are expected to fall quite rapidly during the period to 1981 at a rate faster than that of recent years, but slower than the decline during the period of textile industry reorganisation from 1959 to 1963. During this period it is expected that the main contraction will occur in coarse weaving and spinning. After 1981 the labour position may ease and the textile industry in the subregion will probably consist mainly of the activities for which there will always be a substantial home demand, such as fine weaving and finishing, surgical dressings, making up, feltmaking and carpet-tufting. A larger share of the remaining spinning and weaving is likely to be in large integrated mills. From this date onwards, while some further contraction in employment is expected, it will probably be at a much slower rate. With the above rates of contraction over the period 1966 to 1981, the textile industry will shed a considerable number of workers. These losses will not, in fact, result in a similar increase in the numbers seeking other forms of employment. At present the industry has an aged workforce. In 1965, for example, 57% of all employees in the cotton industry as a whole were aged over 40. It is possible therefore that up to 70% of the loss in textile employment by 1981 could occur by retirement and perhaps only 30% of the loss will involve workers who will seek work in other industries. After 1981, there is some indication that the whole of the anticipated decline in the labour force could be met by 'wastage'.

CLOTHING AND FOOTWEAR

8.51 In North East Lancashire the footwear industry is rather more important than the clothing industry, employing about two-thirds of the labour force in this Industrial Order. In the recent past, employment in the footwear industry of North East Lancashire has been declining, in spite of a growing home demand. This has been partly due to a slight growth in productivity and some movement of the industry away from the subregion, but is mainly the result of overseas competition particularly in the fields of slippers and rubber and canvas footwear which make up 50% of present production.

8.52 The probable future outlook for the industry is one of further slow decline. Foreign competition in the slipper market will probably intensify and in the leather footwear industry the subregion is not a big enough centre to achieve the gains in output and productivity from new materials and methods that will be achieved elsewhere. In addition, the industry is bound to feel some of the effects of shortages in the labour market, although due to its relative concentration in Rossendale it will compete mainly with the textile industry for scarce labour. In the recent past the clothing industry has grown sufficiently to compensate for the decline in footwear employment. Future growth is unlikely to be very great because the industry is labour intensive and will be operating in conditions of relative labour scarcity. It has been assumed, in consequence, that employment in the clothing industry will show only a slight gain over the forecast period.

CHEMICALS

8.53 The chemical industry of North East Lancashire is dominated by three large firms. The total market for the present products of these firms is unlikely to grow very rapidly although there may be some development in the markets for some individual products. Productivity in these firms is likely to rise rather faster than output with a resulting decline in employment. Among the smaller chemical firms there may be a decline in output and employment since their products are mainly used by the textile industry.

BRICKS AND CEMENT

8.54 The output of bricks, cement and other building materials in North East Lancashire is not likely to grow very rapidly in the future. The market for the industry's products is very local and there may be some increase in demand as a result of new housebuilding and rehabilitation work. The industry, however, is characterised by a moderate rate of growth in productivity and employment is expected to fall over the forecast period.

THE PRIMARY INDUSTRIES

8.55 Taking into account the main trends outlined above and the National Coal Board's own plans, estimated future employment in primary industry in the study area is shown in Table 8.23.

The Static Industries

FOOD AND DRINK

8.56 It is expected that future local demand for the products of North East Lancashire firms will increase slowly - more slowly than productivity in most sectors of the industry. There will, in consequence, be a fall in employment in such activities as brewing and pie-making, although this will probably be offset by growth in employment in baking, which has shown a consistent tendency to rise in proportion to population.

PAPER, PRINTING AND PUBLISHING

8.57 The paper industry in North East Lancashire has shown fairly rapid growth of employment in the recent past. This has been largely the result of a concentration of the industry in the subregion, with the introduction of shift working and the closure of plant elsewhere. The scope for further concentration is limited but there are still improvements to come in productivity. It is expected, therefore, that employment in this activity will fall very slowly, and it is probable that the decline will be offset by the growth of numbers employed in printing and publishing.

The Forecasts

8.58 The forecasts of expected employment in North East Lancashire manufacturing industry from 1966 to 1991 are given in Table 8.24. The forecasts show a compound annual rate of decline over the whole period 1966 to 1991 of 0.6% per annum, which is considerably below the average rate of decline of 1.1% per annum experienced between 1953 and 1966. The rate of decline is expected to be least in the Blackburn Area, where the position seems likely to stabilise between 1981 and 1991, and rather greater in the Burnley Area and Rossendale.

8.59 Apart from purely cyclical variations, levels of employment are likely to vary from the forecasts for a great number of reasons. We have already, for example, stressed the difficulty of assessing the rate of technological change. Other developments are equally unforeseeable; the present accelerated demand for gas appliances as a result of the discovery of natural gas is such an example.

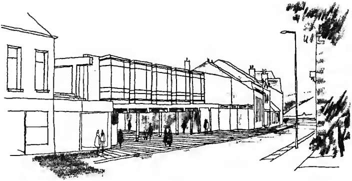
8.60 As regards the main sectors, we would expect that the declining industries will follow a pattern similar to the trend we have shown, but the main uncertainty is in the growing industries. Much depends on how far the enterprises concerned are able to adapt to new circumstances, since they do not all have a wholly favourable basis at present.

TABLE 8.23 FORECASTS OF EMPLOYMENT IN PRIMARY INDUSTRY IN NORTH EAST LANCASHIRE 1966-91

ACTUAL		FORECAST		EMPLOYEES
1966	1971	1975	1981	1991
4600	2150	1310	1150	930

TABLE 8.24 FORECASTS OF EMPLOYMENT IN MANUFACTURING INDUSTRY

EMPLOYMENT		ACTUAL 1966	FORECAST 1975	1981	1991
A	Growing Industries	52,400	55,300	57,500	60,900
	Declining Industries	63,300	46,700	42,000	35,300
	Static Industries	14,900	15,000	15,300	16,200
B	Blackburn Area	66,900	62,200	61,800	61,800
	Burnley Area	45,900	40,300	39,400	38,300
	Rossendale Area	17,800	14,500	13,600	12,300
C	Males	78,000	72,200	71,700	70,800
	Females	52,600	44,800	43,100	41,600
	Total =(A = B = C)	130,600	117,000	114,800	112,400



New Shopping Centre in Rawtenstall

Section Nine

Service industry

KEY FOR TABLE 9.1

XVII	Construction
XVIII	Gas, electricity, water
XIX	Transport & Communications
XX	Distributive Trades
XXI	Finance, Banking, Insurance
XXII	Professional Services
XXIII	Miscellaneous Services
XXIV	Public Administration

Trends in Employment 1953-1966

9.1 Service industries are often centralised in the sense that large towns frequently serve smaller ones. It is, therefore, not surprising to find that they are a less important feature of North East Lancashire's economy than that of the country as a whole. In 1966, for instance, they provided jobs for some 37% of the number of employees in North East Lancashire compared with 57% of the number in Great Britain as a whole. This partly reflects the fact that the North West has a greater manufacturing bias than the country as a whole (see Table 9.1), but the North East Lancashire average is well below this figure. However, all the figures in Table 9.1 understate the importance of service employment as they exclude the self-employed. These form a larger proportion of the workforce in service industries than in manufacturing industries. Including the self-employed, service industries can be estimated in 1966 to account for just under 60% of the country's working population. Moreover, the divergence between North East Lancashire and the rest of the country is also exaggerated as the local figures

TABLE 9.1 EMPLOYEES IN SERVICE INDUSTRIES 1953-66 (000s)

S.I.C.	North East Lancashire			North West Region			Great Britain		
	1953	1959	1966	1953	1959	1966	1953	1959	1966
XVII	10.2	8.6	9.4	154.4	156.2	187.2	1306	1379	1681
XVIII	4.6	3.7	3.9	50.7	47.9	50.7	373	374	423
XIX	9.0	7.7	6.6	249.0	243.4	217.8	1684	1625	1550*
XX	14.3	17.8	17.3	296.6	366.2	384.8	2219	2694	2971
XXI	2.0	2.1	2.3	50.6	55.6	68.4	443	527	639
XXII	12.8	15.6	20.8	178.8	219.4	296.5	1525	1917	2515
XXIII	9.3	11.1	12.1	225.2	217.8	233.4	1898	1955	2206
XXIV	6.9	7.3	6.7	143.9	131.1	134.2	1322	1241	1346
Total Service Industries	69.1	73.9	79.1	1349.0	1436.6	1573.0	10770	11712	13321*
As % of total employment	30.1	34.1	36.9	46.9	49.7	52.5	52.2	54.5	57.0

*adjustment to correct for change of classification 1959-66; other figures unadjusted

Source : Ministry of Labour (there is a tendency for North Eastern Lancashire employment to be understated in comparison with the North West and Great Britain

TABLE 9.2 CHANGES IN THE NUMBER OF EMPLOYEES IN SERVICE INDUSTRIES 1953-66 (%)

S.I.C.	North East Lancashire			North West Region			Great Britain		
	1953-59	1959-66	1953-68	1953-59	1959-66	1953-66	1953-59	1959-66	1953-66
XVII	-15.7	9.3	-7.8	1.2	19.8	21.2	4.5	21.9	28.8
XVIII	-19.5	5.2	-15.2	-2.2	5.9	n.c.	0.4	13.1	13.2
XIX	-14.4	-14.5	-26.7	-2.6	-10.5	-9.9	-3.3	-4.7	-8.0
XX	24.5	-2.8	21.0	14.6	5.2	29.5	14.5	10.3	33.8
XXI	7.5	9.5	15.0	15.4	23.0	35.1	18.9	21.3	44.2
XXII	21.8	33.2	62.4	15.7	35.1	65.9	19.6	31.2	64.9
XXIII	19.4	9.1	30.1	-3.9	7.1	3.7	-0.2	12.8	16.2
XXIV	5.8	-8.2	-2.9	-4.6	2.2	-6.7	1.3	8.5	1.8
Total service industries	7.1	7.2	14.8	6.6	9.5	16.9	8.7	13.8	23.8
Proportion of total employment	10.3	9.7	18.7	6.0	5.7	12.0	4.4	4.6	9.2

Note : Figures not adjusted for changes in classification at 1958.

KEY FOR TABLES 9.2 and 9.3

XVII	Construction
XVIII	Gas, electricity, water
XIX	Transport & Communications
XX	Distributive Trades
XXI	Finance, Banking, Insurance
XXII	Professional Services
XXIII	Miscellaneous Services
XXIV	Public Administration

TABLE 9.3 SERVICE EMPLOYEES IN NORTH EAST LANCASHIRE 1953-66

SIC	Blackburn Area			Burnley Area			Rossendale Area		
	1953	1966	% change 1953-66	1953	1966	% change 1953-66	1953	1966	% change 1953-66
XVII	5043	5211	3.3	3504	3187	-9.0	1656	1024	-38.2
XVIII	2624	2411	-8.1	1563	1382	-11.6	445	120	-73.0
XIX	5026	3632	-27.7	3490	2490	-22.0	732	503	-31.3
XX	7641	9839	28.8	5303	6371	20.1	1307	1121	-14.2
XXI	1043	1155	10.7	803	1002	24.8	193	170	-11.9
XXII	7681	12816	66.8	4231	6089	43.9	894	1880	110.3
XXIII	5205	6244	20.0	3360	5098	51.7	771	802	4.0
XXIV	3373	3534	4.8	2870	2497	-13.0	699	716	2.4
Total service industries	37636	44842	19.2	25124	28116	13.2	6697	6336	-5.4
As % of total	32.2	39.5	22.7	29.7	35.9	20.8	22.9	25.8	12.7

exclude a number of employees, mainly civil servants, whose National Insurance cards are changed centrally. By making an estimate of these factors, it appears that total service employment in 1966 amounted to some 40% of total employment in North East Lancashire. This compares with 59% for Great Britain as a whole, on the same basis. Thus, the difference between North East Lancashire and Great Britain is only very slightly less (1%) than that indicated by Table 9.1.

9.2 There has been considerable growth in the service sectors in recent years, and employment in 1966 was nearly 15% higher than it was in 1953. However, although this partly offset the decline in manufacturing employment over the period, the rate of increase was substantially below that of Great Britain as a whole (see Table 9.2). The overall increase masks decline in some industries and very rapid increases in others. There were substantial declines in transport and public utilities, in both Great Britain and North East Lancashire, but the decline was more severe in North East Lancashire. In the expanding sectors (such as the distributive trades, and professional and miscellaneous services) the rate of growth in North East Lancashire was well below the national average. The large decline in the local construction industry up to 1959 clearly brings out the failure of the subregion to share in the country's economic growth. Since then, however, central area redevelopment and slum clearance schemes in a number of North East Lancashire towns have helped to reverse this trend.

9.3 Service industries are, however, geared to population levels, and the slow rate of growth in North East Lancashire is partly caused by the decline of population in the subregion. This is clearly indicated by the last lines of Table 9.1 and 9.2 which indicate that the proportion of labour engaged in the service industries has grown faster in North East Lancashire than it has in the country as a whole. The fact that the North West Region is also nearer the national average now than it was in 1953 suggests that there may be a general tendency for service industry to become more evenly distributed. This does not, however, mean that if there had been a population increase in North East Lancashire during this period, there would have been a faster than average increase in service employment. In those regions where economic growth is rapid the impetus is provided by manufacturing industry, and service industries are faced with labour shortages. This causes the proportion of employees engaged in them to fall.

Trends within North East Lancashire

9.4 There is a tendency for service industries to centralise in Blackburn or Burnley. In general, however, employment growth has followed the patterns of population change. Expressing service employment as a proportion of total employment, Table 9.3 shows that there was little difference in growth between the Blackburn and Burnley Areas. Again, although there was an absolute decline in the numbers employed in the Rossendale Area, there was still a relative growth in service employment at a rate somewhat lower that of the other two Areas. The rates of growth or decline of each industry were much the same in Rossendale, except that the contraction of the declining industries was more pronounced. The faster overall increase in the Blackburn Area than in the Burnley Area was due largely to a recovery in construction employment (the schemes for central area redevelopment and slum clearance in Blackburn County Borough are the biggest in the subregion), and a faster rate of growth in professional services, particularly in medicine.

9.5 The expansion of the service industries has not, however, greatly helped to stabilise population in the subregion. This is because jobs in the service industries are not as well paid as those in manufacturing and are relatively unattractive to men. In fact there was no increase in male employment in the service industries over the years 1953-66. The expansion of service industries has provided alternative employment for women displaced from the textile and other manufacturing industries. About an eighth of the employment opportunities for women (over 10,000 jobs) transferred from primary and manufacturing to service industries between 1953 and 1966. At the end of the period, there were 40% more women working in the service industries. As is shown in Table 9.4 this follows the pattern experienced in the county as a whole, but in North East Lancashire, because of the sharp decline in manufacturing and the high female activity rates, each trend was accentuated.

9.6 Table 9.4 also shows that this was a process experienced by virtually all the service sectors. The female proportion of each industry's labour force increased, except in miscellaneous services (where it reflects the sharp decline in the number of domestic servants). Significantly, however, the trend was also the result of the structure of female employment. Those industries which were predominantly male employers were those which declined, while the expanding industries are substantial employers of women. Table 9.5 shows the change in employment for women in the four expanding and the four declining industries in North East Lancashire identified in Table 9.2. Clearly the prospects for female employment

TABLE 9.4 FEMALE EMPLOYEES IN SERVICE INDUSTRIES 1953-66

S.I.C.	North East Lancashire			Great Britain change	Females as % of total employment			
					North East Lancashire		Great Britain	
	1953	1966	Change 1953-66 (%)	1952-65(%)	1953	1966	1952	1965
A	296	383	29.4	96.2	2.9	4.1	3.4	5.2
B	331	412	24.5	40.5	7.2	10.5	10.1	12.9
C	747	837	12.0	5.0	8.3	12.6	14.4	15.9
D	6400	9365	46.3	48.6	44.9	54.0	49.0	53.4
E	675	1072	58.8	69.2	33.1	46.1	39.0	45.3
F	8216	14464	76.0	64.5	64.1	69.6	64.4	66.3
G	7147	7008	-1.9	1.2	76.8	57.7	64.2	56.8
H	1239	1685	36.0	0.4	17.8	25.0	27.9	28.8
Total Service Industries	25051	35226	40.7	32.5	36.3	44.4	38.4	41.8

Note: Figures modified for 1958 change in classification

are still good. It is only necessary for the proportion of women employed in service industry employment to remain at its present level for there to be a further increase in the demand for female labour. In fact it is likely that the demand might soon exceed the supply to produce an increase in the proportion of men employed.

The Method of Prediction

9.7 Service industries have been given separate treatment from manufacturing industry because they are far more closely linked to the local market. This means that one cannot think in terms of the movement of firms into or out of the subregion in the same way as one can of manufacturing firms, which generally serve a larger market, and to which location is not of such prime importance. The size of the local population is, therefore, the most important determinant of employment in service industry, although it is far from being the only one. Income variations cause varying demands to be put on some sectors, such as retail trade. Moreover, although local people generally purchase from firms in their own service industries they are free to travel.

KEY FOR TABLE 9.4

XVII	Construction
XVIII	Gas, electricity, water
XIX	Transport & Communications
XX	Distributive Trades
XXI	Finance, Banking, Insurance
XXII	Professional Services
XXIII	Miscellaneous Services
XXIV	Public Administration

TABLE 9.5 WOMEN EMPLOYEES BY EXPANDING AND DECLINING INDUSTRIES 1953-66

	NUMBERS		% OF TOTAL	
	1953	1966	1953	1966
Expanding Industries	22,438	31,909	89.6	90.6
Declining Industries	2,613	3,317	10.4	9.4
Total	25,051	35,226	100.0	100.0

write or telephone for services from elsewhere. Thus, to take an extreme example, stockbrokers, classified as a service industry, are heavily concentrated in London with only a sprinkling in provincial cities. Again, retail shops are proportionately more numerous in large towns than smaller ones.

9.8 In order to take account of these variables, we based our estimates of the future of service industry in the subregion, without the new town, on the following sequence :-

a) We made a study of the national trends in service industries. Great Britain employment data is available for over 30 service industries and these were analysed and compared with population trends, and in some cases with other factors, to derive a forecast for employment in the country as a whole.

b) For Central Lancashire, and each of the three Areas of North East Lancashire, the employment in each of the 30 or so industries was studied. We compared these figures with local population figures, and the national employment and population levels, to obtain a measure of whether each local industry was larger or smaller than the average. We repeated this analysis for several different years to see whether local service industry was growing more slowly in relation to population than the service industries in the country as a whole.

c) We then combined the results of the national forecast (a), the local variations (b) and our own population forecasts (Section 11) to provide estimates of future employment.

9.9 The process can be illustrated by tables showing how calculations were done for a hypothetical industry. As a first step we obtained population and employment data for Great Britain and the local area in order to calculate the employment/population ratios and, based on these, a statistic which we call the 'provision index'. In the example (Table 9.6) the industry has not grown as fast locally as it has nationally, although population growth has been faster. As a result the employment/population ratio has not increased as rapidly as the national one. The 'provision index' gives an indication of whether the local industry is as large as one would expect it to be if the local and national employment/population ratios were equal. In this case the industry was below the national average in 1952 and further below it in 1966, as its employment/population ratio grew relatively slowly.

9.10 We next projected values for employment per 10,000 people in Great Britain and for the local 'provision index' which we combined with the local

TABLE 9.6 ILLUSTRATION OF PREDICTION METHOD (Para. 9.9)

		1952	1959	1966
Employment	- Great Britain (000's)	950	1352	1782
	- Area X (000's)	3.42	4.64	5.81
Population	- Great Britain (000,000's)	50	52	54
	- Area X (000's)	200	210	220
Employment per 10,000 population				
	- Great Britain	190	260	330
	- Area X	171	221	264
Provision Index	Great Britain	100	100	100
	- Area X	90	85	80

Note: $\frac{\text{Employment/10,000 (G.B.)}}{\text{Employment/10,000 (Area X)}} = \frac{100}{\text{Provision Index (Area X)}}$

TABLE 9.7 ILLUSTRATION OF PREDICTION METHOD (Para. 9.10)

Projected	1966	1981	1991
Employment/10,000 - G.B.	330	480	580
Provision Index - Area X	80	69	62
Population - Area X	220	225	230
Calculated from above			
Employment/10,000 - Area X	264	331	360
Employment - Area X (000s)	5.81	7.45	8.28

TABLE 9.8 PROJECTED EMPLOYMENT* PER 10,000 POPULATION RATIOS - ALL SERVICE INDUSTRIES

	1966	1981	1991	1966-91 %change
Great Britain	2237	2658	2747	18.8
Blackburn Area	2025	2206	2301	13.6
Burnley Area	1923	2041	2117	10.1
Rossendale Area	1505	1592	1637	8.8
North East Lancashire Subregion	1934	2089	2170	12.2

* self-employed and employees : 1966 figures partly estimated

population forecast (Table 9.7). We repeated this procedure for the 37 service industry categories and the three Areas of the subregion. A simple projection of trends was seldom possible and we had to use a considerable amount of judgement both in interpreting the national statistics and future national trends, and even more so in studying the local position.

Forecasts

9.11 The results indicated that there would be a continuous growth in the employment/population ratio in North East Lancashire (Table 9.8). Although in the country as a whole, service industry will continue to grow rapidly and may well account for some 65% - 70% of the total labour force by 1991, the rate of growth in North East Lancashire is likely to be much slower for the following reasons :-

a) There will be slower growth in population than in the rest of the country. This is discussed elsewhere in this report and does not, of course, explain the slower growth in the employment/population ratio in Table 9.8.

b) In some of the declining industries like railways and public utilities, the decline is likely to be proportionally more severe in the subregion than in the rest of the country.

c) Those industries which are expected to grow fastest are not very important in North East Lancashire (i.e. their provision indices are relatively low). Their growth does not therefore, contribute as much to employment as it does elsewhere.

d) In most of the industries studied, the 'provision indices' have been declining over the past fifteen years. In others we could identify factors which would make for decline in the future. Only in a few cases could we predict that there would be increases in the indices and these were more than outweighed by the decreases. Thus, overall, there would have been declines in the 'provision index' for North East Lancashire even without the factors mentioned in (b) and (c).

The prospects appear to be considerably better for the Blackburn Area than for either the Burnley or Rossendale Areas. Again, the four factors listed above explain the difference. The declining industries are less important in Blackburn, the expanding ones more so, and the decline in some of the 'provision indices' is likely to be less severe there than elsewhere.

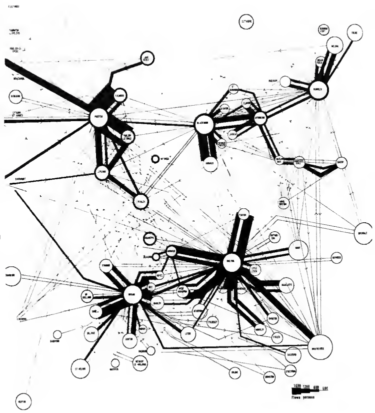
9.12 After taking the middle of our population estimates into account, Table 9.9 shows the likely pattern of change. This indicates that the Blackburn Area's predominance as the main service industry centre will become more pronounced because of the slower population growth elsewhere in North East Lancashire. (The way population estimates were obtained is outlined in Section 11 below.) The pattern of relative growth of different service industries is likely to be similar to that occurring over the last few years. It is likely, however, that the decline in the transport and communications sector will be reversed, as the decline in public transport levels off and other transport services continue to grow.

TABLE 9.9 EMPLOYMENT* IN SERVICE INDUSTRIES 1966-1991 (000's)

	1966	1981	1991
Blackburn Area	50.9	58.8	63.8
Burnley Area	32.9	34.9	37.3
Rossendale Area	8.0	7.6	7.4
Total	91.8	101.3	108.5

* Including self-employed

10.1 1961 JOURNEY TO WORK PATTERN IN CENTRAL AND NORTH EAST LANCASHIRE



Section Ten

The journey to work

Introduction

10.1 Our studies of the present and future journey to work patterns for North East Lancashire have taken two forms:-

(a) The formulation and calibration of a gravity model of journey to work flows, undertaken in association with the Ministry of Transport. The model and its data inputs are outlined in Appendix J. Unfortunately, as a result of unforeseen difficulties, progress on the model is not yet sufficiently advanced to provide results for the present study.

(b) Survey of existing journey to work flows and the local factors which induce them. This is the work which is discussed in this section.

10.2 The most recent comprehensive picture of the pattern of journey to work movements in North East Lancashire is to be found in the volumes of the 1961 Census, although the information from the 1966 sample Census should be available later in 1968. The 1961 information is presented graphically in Fig. 10.1. The following points are of interest:-

(a) Three distinct clusters of work movement stand out - one centred upon Preston, Leyland and Chorley, another upon Bolton and Wigan and a third upon the towns of Blackburn and Burnley. Movements from one cluster to another appear to be comparatively rare.

(b) The Preston, Leyland and Chorley area attracts considerable daily movement from the south and west. Flows eastwards to and from the Blackburn district, however, are relatively insignificant in scale.

(c) Within North East Lancashire two sub-clusters may be distinguished, one based upon Blackburn, Darwen and Accrington with Haslingden outlying to the south, the other centred on Burnley, Nelson and Colne. The net flow of workers travelling daily between these two sub-clusters is small.

10.3 In the time available it was impossible to carry out a comprehensive journey to work survey. Our aim, therefore, has been:-

(a) To probe more deeply the local condition which may induce the movement of labour between areas in an attempt to explain the existing pattern and to provide a base for the assessment of future movement in the subregion.

(b) To discover, by sample methods, whether major changes have occured to the 1961 journey to work pattern.

10.4 Analysis began with sample examination of local variations in wages and earnings for a variety of occupations in manufacturing industry. Information on earnings actually paid, received or offered was obtained from three sources:-

(a) Employers, either directly or by their returns to the Ministry of Labour.

(b) Records of wages offered for vacancies notified to the Ministry of Labour.

(c) Workers who had recently changed their employment.

As a result, we are able to indicate, very broadly, how earnings vary from area to area for two groups of occupations - skilled engineering workers, and other manual workers. The data, however, is not as limited as it might appear since many workers in engineering occupations perform tasks in a wide range of industries other than engineering.

10.5 The results, which are presented in detail in Appendix J, show that skilled engineering workers in North East Lancashire tend to receive about £1 a week less than their counterparts in Central Lancashire. When this figure is corrected for an equivalent working week the difference widens to £1 10s. to £2 a week. For other workers the weekly

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difference in earnings appears to be £2 a week. When corrected for an equivalent working week, the difference is probably about £1 10s. Differentials tend to increase with distance eastwards from Central Lancashire, although variations in earnings tended to be extremely wide, so that it was impossible to distinguish, for example, 'high' and 'low' wage areas within the study area. Earnings in Central Lancashire, and even more so those in North East Lancashire, lie some way below the national average for the occupations considered. The present differential is estimated at about £4 a week in actual earnings. When this is corrected for the difference in hours worked the difference increases to around £6 a week.

10.6 To supplement the above information on local labour conditions we made an analysis of Ministry of Labour data on the numbers unemployed in certain occupations and the local vacancies available to them. This enabled us to measure the tightness of the local labour market for each occupation - the excess of numbers unemployed over declared vacancies in the labour exchange areas in North East Lancashire and the areas surrounding Central Lancashire. This examination revealed that in general, the same types of workers were in demand in all parts of North and Central Lancashire at roughly the same point in time. The employment exchange in the Fylde areas had not experienced labour shortages to the same degree. There was, in fact, a tendency for a relative shortage of job opportunities for a wide range of skills.

10.7 In an attempt to discover the length of journey to work which workers in North East Lancashire are prepared to undertake at present the details of residence of 11,124 workers were obtained from employers and analysed. (See Appendix J). Of these 79% worked in the labour exchange areas in which they lived, and travelled less than 5 miles to work. A further 12% lived in an employment exchange area next to the one in which they worked, and many of these will travel less than 5 miles. In short, the proportion of workers travelling less than 5 miles daily is probably close to 90%, although, as expected professional workers tend to travel longer distances to their work place. There appear to be no important discernible net flows from one part of the region to another. In particular there is little evidence of a net movement from east to west of the subregion.

10.8 To discover more about the present journey to work flow from the Blackburn Area to Central Lancashire, an analysis was carried out of the employment records of the two major employers in the latter area. The plants of the two companies concerned are so distributed that they can draw upon workers from a large catchment area so that a comparative study is possible. This study is described in Appendix J. The conclusions of this analysis are first that the flow of manual workers from North East Lancashire to Central Lancashire is very slight - the Fylde, Southport and Wigan areas are all more important suppliers of labour, although they are on the whole further from the plants concerned than the Blackburn Area. Secondly, the 'watershed' for journey to work from North East to Central Lancashire appears at present to pass through Samlesbury. Lastly, the home addresses of recent recruits to one major company show no evidence of a change in the relative importance of the surrounding areas as suppliers of labour to Central Lancashire.

10.9 The following conclusions emerge from the survey material described above:-

(a) The journey to work pattern in the study area revealed in the 1961 Census has not altered in its essentials.

(b) In particular, there appear to be no areas, (other than immediate suburbs) which import or export significant numbers of workers each day. The average journey to work is short, certainly much less than 5 miles.

(c) There is no readily discernible connection between differentials in earnings and the existing journey to work pattern. High paying firms in North East Lancashire did not appear to have a noticeably wider catchment area than others, although this was less true of such firms in Central Lancashire.

(d) The absence of significant daily movement between the Blackburn Area and Central Lancashire is readily explained by an examination of wage differentials and local employment opportunities.

(e) The areas supplying labour to Central Lancashire at present are those where employment opportunities, especially in the metal working industries have not developed rapidly enough to absorb the local supply of trained labour. (A substantial proportion of these flows is, of course, accounted for by the daily movement of managers and other professional workers).

Cloubridge Reservoir, Dunnockshaw, south of Burnley

TABLE 11.1 NATURAL INCREASE ON BASE YEAR 1961 ASSUMING NO MIGRATION

	1961	1966*	1971	1976	1981	1986	1991
Blackburn Area							
Upper			256,833	263,563	272,316	283,649	298,127
Most likely	251,121	252,994	255,876	260,414	265,891	272,861	281,742
Lower			254,807	257,365	259,626	262,233	275,517
Burnley Area							
Upper			174,801	179,299	185,311	193,688	202,991
Most likely	171,829	172,440	173,905	176,954	180,727	185,502	191,792
Lower			173,209	174,807	176,332	178,105	180,390
Rossendale Area							
Upper			56,759	58,451	60,775	64,362	67,664
Most likely	55,558	56,031	56,529	57,750	59,361	60,965	63,014
Lower			56,298	51,048	77,946	58,567	59,363
North East Lancashire Subregion							
Upper			488,393	501,313	518,402	541,099	568,782
Most likely	478,508	481,465	486,304	495,109	505,979	519,328	536,548
Lower			484,314	489,220	493,904	498,905	515,270

*These figures may be compared with the actual 1966 position in Table 7.1. The difference results from the continued migration loss during the period 1961-66.

Section Eleven

Population and employment forecasts

11.1 This section briefly summarises the projections for population and employment described in previous sections It describes the methods we have used to bring together the results of the analysis so far and outlines the likely prospects for North East Lancashire and its constituent Areas, on the assumption that there is no new town in Central Lancashire. As regards Government assistance to manufacturing industry, such as investment grants and the like, we have taken a 'neutral' assumption - that in the period under discussion no part of this subregion and the Central Lancashire area will be either more or less favoured than any other.

Population

11.2 When we consider natural increase (the anticipated excess of births over deaths) by itself, the range of possibilities for the future population is a very wide one as Table 11.1 shows. It is important to note that the figures do not take into account the effects of migration. When we attempt, for example, to make allowance for the various rates of migration loss which the Areas concerned have actually experienced in the past, the range of possibility increases still further. Calculations with alternative migration losses have been carried out, however, in order to provide a range of possible alternative populations which may then be compared with the forecast number of job opportunities in each case. A compatible set of population and employment forecasts produced by a method of successive approximation will be outlined later in this section.

Manufacturing Employment

11.3 Forecasts of future employment in manufacturing industries have been arrived at after considering national, regional and local trends in output, productivity per worker and numbers employed by each sector on one hand and analysis of the results of a survey of local manufacturing units on the other. Our projections suggest that :-

a) Total employment in manufacturing in the study area is likely to fall fairly rapidly from its present level of 131,000 to about 115,000 in

1981. The fall in numbers employed from 1981 to 1991 is expected to be slight in comparison. Although for this period any projection is naturally more uncertain we expect the change to be from 115,000 to about 112,000.

b) The rates of decline in the three Areas of North East Lancashire are expected to differ widely as a result of the different mix of industry in each. Over the period 1966 to 1981, for example, total manufacturing employment is expected to fall by 7½% in the Blackburn Area, in the Burnley Area by 14% and in Rossendale by over 23%. The rate of decline for all Areas is expected to slacken appreciably between 1981 and 1991. Employment in industry is expected to remain roughly stable in the Blackburn Area, to fall by about 2½% in the Burnley Area and by 9% in the Rossendale Area. It will be appreciated that these figures are fairly arbitrary. North East Lancashire is a relatively small area and the decisions of single large units often have a marked effect on growth or decline in certain manufacturing sectors. Table 11.2 presents a summary of the position.

TABLE 11.2 PROJECTIONS OF MANUFACTURING EMPLOYMENT (000's) WITHOUT THE NEW TOWN

	1966	1981	1991
Blackburn	66.9	61.8	61.8
Burnley	45.9	39.4	38.3
Rossendale	17.8	13.6	12.3

Service Employment

11.4 Service industries have been treated in a different way from manufacturing activities, since their growth is far more closely linked to that of the local population which they serve. We have therefore based our forecasts on an analysis of local, regional and national trends in the growth of service industries as a function of the growth of total population. The results of this analysis may be briefly stated. The rate of growth in numbers employed in service industry will be relatively slow. There will, in addition, be the effect of a slower rate of population increase than in the country as a whole. Much of the increase in employment will occur in the Blackburn Area, the most sizeable and developing service centre in the subregion. Our forecasts, which anticipate the results contained in this section, have already been given in Section 9.

Forecasting Method

11.5 We have made no attempt in previous sections to check that the entire range of population forecasts was consistent with the prospects for total employment opportunities which we have described. The next paragraphs will outline the method by which we arrived at a consistent set of population and employment figures for each Area. The elements which enter into this reconciliation procedure are as follows :-

a) Population, based on the natural increase forecasts modified by the effects of alternative levels of net emigration. The changes in the age/sex structure of the population produced by migration have been allowed for in the calculations.

b) Activity rates reflecting the proportion of males and females in each age group likely to seek employment at a given date in the future. The major uncertainty here is in the activity rate for females since the subregion has traditionally been associated with female activity rates much higher than those which prevail in the country as a whole. We expect this situation to change. Nationally, female activity rates are expected to rise, whereas this could not be anticipated locally. We would foresee rather that local rates would tend in future to approach more nearly the rising national rate. However, local demand for women's jobs could influence the speed of change, and we have tried to estimate it at future dates. Then, taking account of the expected female age-distribution, we have derived overall activity rates. In every case this 'participation rate' for women is considerably lower than the present one.

c) Manufacturing job opportunities, which have been calculated separately for both men and women for each Area of North East Lancashire.

d) Service sector job opportunities similarly forecast for both sexes. The total numbers of such opportunities are, as described in Section 9, taken as a function of the population to be served in each Area.

e) Journey to work : this is an area of major uncertainty. It is doubtful whether any existing method satisfactorily predicts the likely daily journey to work pattern for dates so distant in the future. We have therefore used the 1961 Census data on present net flows and attempted to measure the sensitivity of the overall forecasts of population and employment to substantial change in the volume of these flows.

11.6 For each combination of natural increase and net emigration a range of possible populations emerges for each Area. From these alternatives we made a number of estimates of the male and female workforce for 1975, 1981 and 1991 on the basis of varying activity rates. The appropriate levels of service employment were calculated for each population result, and added to the forecast of male and female employment in manufacturing industry in each Area. We then compared the results with the male and female workforce associated with each of the population/activity rate combinations.

11.7 The outcome of the process is a series of statements for each Area of the imbalance between the numbers likely to be seeking employment in 1975, 1981 and 1991, and the job opportunities likely to be available to them. Where surpluses or deficiencies arose the possibility of achieving a balance was considered by the operation of the following :-

a) Further variations in female participation ratios.

b) Possible variations in journey to work flows either within North East Lancashire or to outside areas.

c) Allowing migration rates to vary, noting the effect of the age/sex composition of the population, the workforce and the numbers employed in service industry.

d) Assuming varying degrees of interchange between male and female job opportunities.

Results

BLACKBURN AREA

11.8 The population of the Blackburn Area is likely to increase slightly in the period to 1981. The degree to which this occurs may depend on the extent to which job opportunities for women are acceptable to men seeking employment. Our forecasts suggest a shortage of female labour more than counterbalanced by a surplus of men seeking employment. Given that some of these jobs are acceptable to men (at possibly somewhat lower than average male earnings), and that net journey to work flows from North East Lancashire to areas outside are somewhat higher than at present, the population of the Blackburn Area could rise to about 265-270,000 by 1981. This figure implies that the number of people leaving the Area will roughly balance that of people moving into it. Indeed, it is possible that there may be a slight net flow of people from the other Areas of North East Lancashire or some increase in net journey to work flows toward the Blackburn Area. After 1981 it is possible that total job opportunities may not increase rapidly enough to absorb the numbers entering the labour market. Emigration may then marginally increase and the population of the Area will probably rise to 275-280,000.

BURNLEY AREA

11.9 By 1981 the population of the Burnley Area will, on the basis of the forecasts of manufacturing and service employment, amount to 170-173,000 people. There will probably be a slight shortage of female workers and a substantial surplus of men, the majority of these seeking work elsewhere, either within the study area, in the West Riding of Yorkshire, or in the towns to the south made more accessible by improvements in road communication. Migration of people from the Area will probably continue at rates similar to those of the recent past. By 1991, the position will not alter in its essentials. There will probably still be a surplus of male labour, increased journey to work to areas outside North East Lancashire and continuing migration. The population of the Area will probably be 175-178,000.

ROSSENDALE AREA

11.10 Our forecasts of job opportunities in the Rossendale Area suggest a rough overall correspondence between the numbers seeking employment and the jobs available for them at a population level of 45-50,000 in 1981, and about 45,000 in 1991. These figures anticipate a continuing net loss of population from the Area at rates close to those experienced in the recent past, and a higher proportion of the Area's labour force travelling daily to work in the northern towns of the South East Lancashire conurbation.

North East Lancashire and its Town Centres

11.11 Summarising the results outlined above, future population and employment in North East Lancashire at 1981 and 1991 will probably be distributed as shown in Tables 11.3 and 11.4. The 1966 figures are also shown for comparison. The implications of these changes in the distribution of population for the study area's commercial centres are set out in Section 13. Briefly, the present hierarchy is unlikely to change radically in the period to 1991. There will, however, be a faster growth of shopping and other facilities in the Blackburn Area than in the Burnley and Rossendale Areas. It is probable that present development proposals will be sufficient to satisfy future demands for floorspace in all centres, except Blackburn, where there may be some faster growth of shops and offices. Blackburn town centre will emerge more and more as the leading commercial focus for the whole subregion.

11.12 The argument in the preceding paragraphs has been based on the assumption that equality between jobs and workers will, in principle, be accompanied by a rough balance between the numbers of people entering and leaving an area. This is, in fact, unlikely to be the case for North East Lancashire. Our surveys have demonstrated the existence of a strong environmental "push" from the study area. Much, again, depends on the nature of the employment opportunities available and how earnings and prospects in North East Lancashire will compare with those of other subregions. If the subregion does not prosper as much as other parts of the country there will be an increasing tendency for people to leave it and a decreasing tendency for people to move into it. It is important to realise the effect that even small changes in in- and out-migration rates can have on net migration. At present, roughly speaking, it appears that for every 10 people who move out of the subregion, about 9 move into it. If therefore, there were a 10% increase in the number leaving the subregion with an unchanged number entering it, the result would be a 50% increase in net migration loss. Further, the most mobile age group of the population, containing those between the ages 20-39, is expected to increase substantially in the study area in the future. This will probably result in an increased number of people leaving the subregion, although the precise net effect cannot be calculated. Again, the method used to calculate service employment from population totals, has probably led to an overestimate in the number of service job opportunities at the upper end of the population totals.

11.13 The effect of this and of the general uncertainty concerning migration levels leads us to suggest that the population totals given in the preceding paragraphs may be rather optimistic ones. Indeed, it might be more realistic to view the probable range within which the future population of the subregion will lie as being 460,000 to 500,000. Having examined a large number of alternative assumptions as to the future, it is highly unlikely in our view that the upper figure will be reached.

11.14 It remains to point out that the first task for measuring 'impact' is to arrive at a consistent set of population and employment projections for the study area without the new town. Having done this it is necessary, adopting the same methods, to work out the likely position with the new town. The factor we are attempting to measure is the difference between the two sets of figures, which could then be attributed to the presence of the new town development. The absolute levels of the figures, while of interest in themselves, are of less immediate importance to our task.

TABLE 11.3 NORTH EAST LANCASHIRE POPULATION PROJECTIONS (000's)

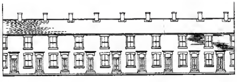
	1966	1981	1991
Blackburn Area	251	265-270	275-280
Burnley Area	168	170-173	175-178
Rossendale Area	54	45-50	45-46
North East Lancashire	473	480-493	495-504

TABLE 11.4 NORTH EAST LANCASHIRE EMPLOYMENT PROJECTIONS (000's)

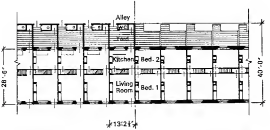
	1966	1981	1991
Blackburn Area	119,620	121,600	125,500
Burnley Area	81,140	75,100	75,900
Rossendale Area	26,240	21,200	19,700
North East Lancashire	227,000	217,900	221,000

Note: The service elements in these totals are based on population served, subject to slight variations

The bridge over the River Calder at Higherford.



Street Elevation (30'-0" Street Width)



Ground Floor Plan

First Floor Plan

12.1 1875 TERRACED HOUSING

Section Twelve

Living conditions

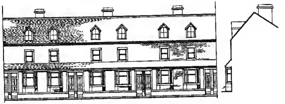
The Subregion

INTRODUCTION

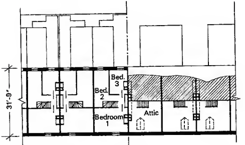
12.1 We attempt in this section to make a broad appreciation of the living conditions experienced by the people of the subregion and to forecast in what way these may change in the future without the new town. We deal with the major aspects of housing, industry, social and commercial facilities and air pollution. We describe the quantity and quality of the present housing stock. We define the target levels of future building required to bring the housing stock up to a satisfactory standard, and contrast these with the probable future building programme in relation to housing needs and demands in the subregion. We briefly describe the suitability of industrial sites for present day use and go on to see whether there is sufficient and satisfactory land to accommodate future industrial and residential development. We describe the present social and commercial facilities available and consider how these may change in the future. Finally we consider air pollution, the man-made contribution to the natural environment, to see what change for the better there is likely to be in the future. In the time available for our study we have had to rely heavily upon the knowledge and experience of the local authorities in the subregion and the questions with which we importuned them are set out in Appendix F. Our task would not have been possible in the time available without the full, prompt and ungrudging co-operation of many people.

HOUSING

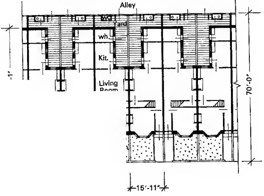
12.2 The pattern of the existing physical environment in the study area was set during the period of high economic activity produced by the boom in the cotton industry. The number of buildings still surviving from the period is high while the standards of housing then produced were by present-day measures particularly low. Approximately two-thirds of the present total stock of 172,440 houses were built before 1911, compared with well under half for England and Wales. When the peak level of population in North East Lancashire was reached in 1911 there were 139,000 houses to accommodate 592,000 people at an occupancy rate of 4.26 persons per dwelling. The population has now fallen to about 473,000 lowering the average rate to 2.78.

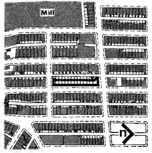


Street Elevation



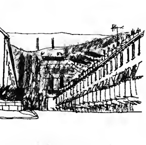
First Floor Plan 15'-11" **Attic**





STREET PLAN : 1875 TERRACED HOUSING

The street plan for the terraced housing built about 1900 is almost identical to that shown above.



Terrace housing in Nelson with the roofs sloped continuously across the contours

Thus, in contrast to much of the rest of the country, the study area is not deficient in the quantity of its housing. The quality, however, is poor. 58% of the total increase in housing stock between 1841 and 1961 took place between 1861 and 1901 and only 20% between 1921 and 1961 (Figure 4.1).

12.3 Figures 12.1 and 12.2 illustrate examples of characteristic by-law terrace housing of the late 19th Century. A typical terrace built about 1875 contains 12 to 15 houses each about 13 feet wide on a plot 40 feet deep (Figure 12.1). The living room of each house opens on the street and there is also a kitchen downstairs, two bedrooms upstairs and a privy and coal house in the rear yard. Elevations are of classical simplicity. The usual building materials are brick in the Blackburn Area and local millstone grit with ashlar facings in the Burnley and Rossendale Areas. In Burnley and Nelson many terraces on sloping sites are built across the contours. For the sake of cheap construction their long slate roofs echo the slope of the street rather than following the stepped rhythm of the individual houses.

12.4 Terrace housing built about 1900 usually has higher space standards (Figure 12.2). On a 16 feet by 70 feet plot individual houses have a living room opening off an entrance hall, a parlour, kitchen and scullery downstairs, a small front garden and a water closet in the yard. Upstairs there are three bedrooms and an attic. Some houses also have cellars or an upstairs bathroom. While the design of such housing is more self-conscious than that of the earlier period, and street facades are enlivened with bay windows and barge-boarded dormer windows, the construction is much more substantial. Even at this date, however, few houses were built with inside water closets and many had only 'tipplers' or waste water closets.* In Clayton-le-Moors in 1916, for instance, over 96% of premises had 'tipplers', and in 1960 the figure was still well over 53%. The proportions of premises lacking hot water taps, baths and water closets are given in Table 12.1. In Table 12.2 the net floor area of typical 19th Century two and three storey housing is compared with the standards recommended by the Parker Morris Committee in 1961 for housing to be built in the future. The comparison may be seen to depend upon rates of occupancy; at low rates the later 19th Century housing does not compare unfavourably with the Parker Morris standard. While the terrace houses we describe were built for families

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* The 'tippler' is a type of water closet which is flushed by discharge from a pivotted receptacle supplied with waste water from the kitchen sink. As the receptacle fills the centre of gravity rises above and to one side of the pivot to produce an automatic flush at intervals determined by the rate of flow of the sink water.

TABLE 12.1 HOUSING STANDARDS FROM 1961 CENSUS AND 1966 SAMPLE CENSUS
(Local Authorities for areas with less than 15,000 population were excluded from the 1966 census.)

	PERCENTAGE OF HOUSEHOLDS LACKING					
	Hot Water Tap		Fixed Bath		Water Closet	
	1961	1966	1961	1966	1961	1966
Blackburn C.B.	29	20	40	31	4	*
Accrington M.B.	23	16	37	28	8	*
Church U.D.	32		46		4	
Clayton-le-Moors U.D.	30		49		3	
Clitheroe M.B.	14		27		12	
Darwen M.B.	30	19	47	34	4	*
Great Harwood U.D.	21		39		2	
Oswaldtwistle U.D.	29		44		8	
Rishton U.D.	24		43		5	
Blackburn R.D.	14	6	21	11	13	7
Clitheroe RD	13		24		16	
Sub-Total Blackburn Area	23		27		6	
Burnley C.B.	27	17	41	30	3	*
Barrowford U.D.	19		28		8	
Brierfield U.D.	12		22		8	
Colne M.B.	11	4	19	12	8	4
Nelson M.B.	12	8	20	15	8	3
Padiham U.D.	21		37		4	
Trawden U.D.	15		29		17	
Burnley R.D.	18	9	32	21	19	8
Sub-Total Burnley Area	19		33		7	
Bacup M.B.	26	19	44	35	24	*
Haslingden M.B.	18		35		16	
Rawtenstall M.B.	20	12	37	26	21	3
Sub-Total Rossendale Area	21		38		20	
Grand Total North East Lancashire	22		36		8	

* Figure subject to sampling error.

TABLE 12.2 HOUSING SPACE STANDARD
(Floor area in square feet)

	1875	1900	Parker Morris Committee Recommendations				
			2 person	3 person	4 person	5 person	6 person
Floor Area)	465	700-960	(480	610	720-800	810-1010	900-1050
Additional storage)			(30	32	35-50	35-50	35-50
Total	465	700-960	510	642	755-850	845-1060	935-1100

of six or more they are now often occupied by much smaller households. They may therefore still satisfy present day standards in terms of dwelling size.

12.5 19th Century terrace housing was laid out within a precise, rectangular grid of streets. The principal streets were 36 feet wide and other streets were 30 feet wide. Pairs of terraces backed on to 12 feet alleys. Small residential areas were built up individually by different developers without a coherent overall plan. The mixture of housing and large scale industrial premises is by today's standard particularly unpleasant and inefficient. Net residential densities in inner areas of towns average 30 to 40 dwellings per acre but most areas of pre-by-law housing at densities of more than 50 per acre have been cleared. Housing built since 1920 is usually in the outer area of towns at net densities below 15 dwellings per acre. However, while such housing has better facilities and higher space standards it is generally no better related than earlier development to any good overall town structure.

12.6 There are varying estimates at present of what constitute satisfactory housing conditions. A minimum standard of housing fitness is laid down by the 1957 Housing Act - houses which are so defective with regard to one or more aspects of their building structure, condition, equipment or services as to be unfit for human habitation may be declared to be slums and demolished. The current figures of slum housing were prepared by local authorities for return to the Ministry of Housing under Circular 11/65. The returns for the subregion are given in Column 2 of Table 12.3, and show the total number of houses considered to be unfit for human habitation in the first quarter of 1965. Column 3 shows that over 17,000 such houses or over 10% of the total dwelling stock in the subregion were still standing in 1967.

Note that, in contrast with the sloping roofs of the housing shown in the sketch on page 105, the roofs here are stepped down the contours.

TABLE 12.3 STANDARDS OF 1967 DWELLING STOCK

A* Dwellings requiring demolition or suitable for rehabilitation by 1991

	1 Total housing stock 1967	2 Unfit dwelling MoHLG circular 11/65	3 Unfit dwellings standing 1967	4 Dwellings with a rateable value of £30 or less 1967	5 *
Blackburn CB	37,217	10,000	9,145	18,015	23,545
Accrington MB	13,997	792	743	7,906	7,335
Church UD	2,037	400	349	1,150	1,295
Clayton-le-Moors UD	2,318	123	123	1,575	1,973
Clitheroe MB	4,561	345	320	1,842	2,435
Darwen MB	10,689	266	91	5,658	1,566
Great Harwood UD	3,950	200	200	1,609	750
Oswaldtwistle UD	4,982	550	543	2,739	2,349
Rishton UD	2,084	13	13	1,277	388
Blackburn RD	5,637	26	19	1,266	1,232
Clitheroe RD	2,241	19	13	627	610
Sub-Total Blackburn Area	89,713	12,734	11,559	44,664	43,478
Burnley CB	27,420	2,020	1,756	16,306	15,859
Barrowford UD	1,984	283	277	1,094	753
Brierfield UD	2,711	24	15	1,597	460
Colne MB	7,382	44	0	4,209	1,764
Nelson MB	12,060	40	40	7,809	4,366
Padiham UD	3,659	131	98	2,214	1,867
Trawden UD	783	44	42	622	348
Burnley RD	6,570	345	338	3,213	2,409
Sub-Total Burnley Area	62,569	2,931	2,566	37,064	27,826
Bacup MB	6,174	1,565	1,426	3,786	2,385
Haslingden MB	5,362	520	477	3,288	1,909
Rawtenstall MB	8,622	1,600	1,273	4,508	3,842
Sub-Total Rossendale Area	20,158	3,685	3,176	11,582	8,136
Grand Total North East Lancashire	172,440	19,350	17,301	93,310	79,440

12.7 In Circular 11/65 the Ministry of Housing also stated that a subcommittee of the Central Housing Advisory Committee had been appointed to formulate common standards from which assessments could be made of fitness for habitation and potential for improvement. The report of the subcommittee published in 1966, states that the figures of slum housing returned under Circular 11/65 show a task of such magnitude that it is at present unrealistic to consider raising the minimum standard of fitness much above the level laid down in the 1957 Housing Act. However the report considers that there will still be many houses of at least the minimum standard of fitness which are not in every way satisfactory for habitation by the social standards of the day. Criteria are established for bringing housing up to a full satisfactory standard by rehabilitation or for improving it to a lesser degree if, for instance, its limited life expectancy does not justify the full improvement.

12.8 We have examined the housing stock of the subregion on the basis of the statement in the subcommittee report that housing conditions might become too bad to be tolerated where one or more of the following aspects are unsatisfactory :-

a) the structure and condition of the housing
b) the equipment and services built into the housing
c) the quality of the surrounding environment
d) the space available to individual households
e) the degree of privacy available in dwellings occupied by more than one household

TABLE 12.4 DWELLINGS REQUIRING DEMOLITION OR REHABILITATION BY 1991

7* Percentage of dwellings requiring attention 3+5

	1 Total housing 1967	2 Estimate of dwgs. req. demolition	3 % of dwgs. requiring demolition	4 Estimate of dwgs. req. rehabilitation	5 % of dwgs. requiring rehabilitation	6 Total dwgs. requiring attention 2+4	7*
Blackburn CB	37,217	18,527	50	5,018	14	23,545	64
Accrington MB	13,997	1,541	11	5,794	41	7,335	52
Church UD	2,037	845	42	450	23	1,295	65
Clayton-le-Moors UD	2,318	834	36	1,139	49	1,973	85
Clitheroe MB	4,581	755	16	1,680	37	2,435	53
Darwen MB	10,689	1,442	13	124	1	1,566	14
Great Harwood UD	3,950	500	13	250	6	750	19
Oswaldtwistle UD	4,982	1,061	21	1,288	26	2,349	47
Rishton UD	2,084	88	4	300	14	388	18
Blackburn RD	5,637	757	14	475	8	1,232	22
Clitheroe RD	2,241	375	17	235	11	610	28
Sub-Total Blackburn Area	89,713	26,725	30	16,753	18	42,478	48
Burnley CB	27,420	15,404	57	455	2	15,859	59
Barrowford UD	1,984	537	27	216	11	753	38
Brierfield UD	2,711	83	3	377	13	460	16
Colne MB	7,382	566	8	1,198	16	1,764	24
Nelson MB	12,060	392	3	3,974	33	4,366	36
Padtham UD	3,659	630	17	1,237	33	1,867	50
Trawden UD	783	108	13	240	30	348	43
Burnley RD	8,570	1,880	26	729	11	2,409	37
Sub-Total Burnley Area	62,569	19,400	31	8,426	13	27,836	44
Bacup MB	6,174	1,813	29	572	9	2,385	38
Haslingden MB	5,362	547	10	1,362	25	1,909	35
Rawtenstall MB	8,622	1,719	20	2,123	25	3,842	45
Sub-Total Rossendale Area	20,158	4,079	20	4,057	20	8,136	40
Grant Total North East Lancashire	172,440	50,204	30	29,236	17	79,440	47

Percentages shown in Columns 3, 5 and 7 are all related to the totals shown in Column 1

After consultation with the technical officers of local authorities we have prepared broad estimates of dwellings falling into three categories :-

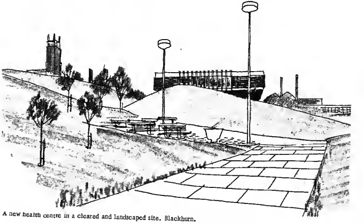
i) those either scheduled for clearance or likely to be demolished by 1991
ii) those that could be rehabilitated to survive until 1991
iii) those likely to survive the period until 1991

Our estimate of the total housing in Categories (i) and (ii) is given in Column 5 of Table 12.3, and amounts to over 79,000 dwellings or almost half the 1967 dwelling stock. This may be contrasted with an alternative comparative measure of dwelling standards in economic terms based upon assessments of rateable value. In 1967 there were over 93,000 dwellings with an annual rateable value of £30 or less. They comprised over 54% of the dwelling stock in the subregion, whereas only 19% of the total dwelling stock in England and Wales falls into this category. Table 12.4 shows that 30% of the 1967 dwelling stock requires demolition and 17% rehabilitation before 1991. These estimates represent targets which will have to be aimed at if the subregion is to enjoy satisfactory housing conditions. The likelihood of their being achieved, the implications this has for future building and clearance rates, and the probable housing conditions that may result in the future are discussed in detail later.

12.9 Most factories in North East Lancashire were built during the late 19th Century to serve the expansion of the cotton industry. With the continuing decline of the industry since 1912 and with closures hastened by the Cotton Reorganisation Scheme, many spinning mills and weaving sheds have been vacated. Of about 280 textile premises in the subregion which have been vacated during the Scheme or subsequently, almost one third have been reoccupied by textile firms, over half have been reoccupied by non-textile firms principally in engineering, while the remaining sixth are either standing vacant or have been demolished. The value of industrial premises as a proportion of total rateable value in the subregion is almost the same as the average for England and Wales (excluding London). A large proportion of industrial buildings are within town boundaries and often on prominent sites adjoining the town centres. In Blackburn and Burnley County Boroughs, for instance, the value of industrial premises is 19% and 21% respectively of total rateable value. This compares with the national average for all county boroughs of about 16% which is due to the more usual pattern of industrial distribution in which many premises are either on the outskirts of the urban area or outside the boundaries.

12.10 Industrial premises built before 1870 in and adjoining central areas are for the most part on small confined sites ranging from ¼ to 2 acres. They are often less soundly built than later premises and while some are still used by the textile industry others are vacant or, as in Nelson, have been demolished to accommodate other central area uses. Industrial premises built after 1870 adjoining central areas are often on sites of over 2 acres and are in better structural condition. If no longer used for textile manufacture they are often suitable for continued use despite difficulties of road access and upkeep. By the beginning of the 1880's there was little spare land left within the towns and factory building moved out along the river and canal banks, and to the edges of the built-up areas where flat land was available. Such premises are usually larger, in sound condition and may have room for expansion, as in the Rosegrove area of Burnley, except where they have been surrounded by later housing development. Road access is usually easier than in the centres of towns and many such premises have been reoccupied by non-textile firms. There was little industrial building between 1910 and the late 1930's, as mentioned in Paragraph B.1. Industrial development since 1937, such as the factories at Whitebirk in Blackburn, or Eastern Avenue in Burnley, has been on large level sites, having good access and usually with space for expansion.

12.11 Although many industrial premises, mostly cotton mills, have been vacated, the sites will not automatically become available for redevelopment. Their suitability for reoccupation by other industrial firms will depend on their structural condition, equipment, ceiling heights, road access, location



A new health centre in a cleared and landscaped site. Blackburn.

and other factors. We have made a brief examination of industrial premises and distinguished two broad categories :-

a) those areas likely to remain in industrial use in 1991
b) those areas where a change of use by 1991 is possible.

These categories are not hard and fast and the representation of specific areas on a map is of necessity somewhat arbitrary. While the obviously 'hard' and obviously 'soft' premises are easily distinguished there is a considerable amount of property between these extremes. The classification of sites is this middle ground is particularly difficult since they may in practice fall into either category according to the efficiency of their use and the degree to which the site may be essential to the redevelopment of particular wider areas. However, our classification provides a broad indication of the proportion of premises in poor condition which, in general, increases from west to east of the subregion. Whereas almost one-fifth of the total acreage in Blackburn falls into category (b), in Burnley the proportion rises to over one-third.

12.12 A considerable extent of industrial land may thus become available for development before 1991, making possible a comprehensive improvement of town structure and land use patterns in conjunction with a concerted approach to the renewal and rehabilitation of housing areas. This will be aided by the likelihood of further land being released as a result of the declining use of railways and canals. The sites of canal wharves and warehouses, of railway stations and goods yards will become available for development sometimes in central areas. Details of railway closures are given in Paragraph 6.17. and further land in and adjoining industrial areas may be released by the closure of collieries. The Bank Hall Colliery in Burnley, for instance, is sited just north-east of the central area and has only a medium life expectancy. It is served by a railway branch and by the Leeds and Liverpool Canal so that the effects of closure will extend beyond its own site boundary.

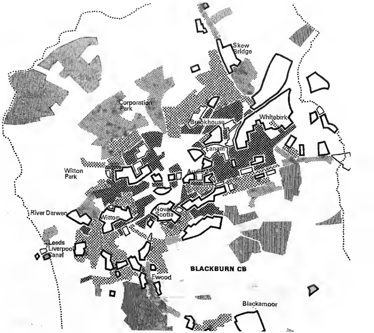
FACILITIES

12.13 We define facilities as the sites, buildings or organisations comprising the broad activity categories of administration, education, welfare, culture, recreation and retailing. In terms of the number of its facilities the subregion does not compare unfavourably with the provision for the rest of Central and South Lancashire which we will refer to as the county average. However, while the subregion contains almost half a million people it does not possess any of the city scale facilities, such as a University, which are usually found in an integrated urban area with the same population. While the densities of many residential areas are high the total population is spread over more than 250 square miles and the topography and communications system renders towns at the extremes of the area remote from each other. In addition, the area is divided between 22 local authorities and has suffered a long-term decline in prosperity. Although there are few facilities which could focus the attention of the whole population, individual towns and localities within towns are well provided with smaller scale facilities like assembly halls, clubs, pubs and buildings through which the active social life of the local people is expressed. There are, for instance, over half as many pubs again and almost twice the number of clubs in relation to population as the county average. Although there may be a sufficient number of facilities it does not follow that their quality will necessarily compare favourably with present standards. Public buildings on the larger scale which are beyond the requirements of immediate necessity, are provided usually only in times of prosperity and most of these in the subregion are therefore at the end of their useful life. Many are both small and outdated because they were often built as a result of bequests to the small independent local authorities, at the end of the 19th Century. Additionally, many schools and hospitals built during the same period are now below the standards of space and convenience which are expected today.

The Blackburn Area

HOUSING

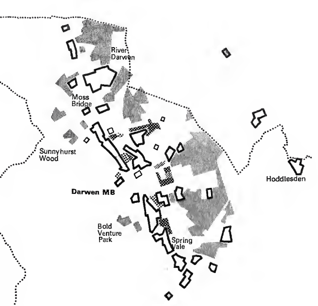
12.14 A particularly high proportion of dwellings will require demolition or rehabilitation by 1991 in Blackburn (Figure 12.3), Church and Clayton-le-Moors (Figure 12.5) as shown in Table 12.4. These towns were built up at an earlier period than the remainder of the Area, and the housing is therefore of a lower standard than that in Accrington, Rishton and Great Harwood (Figure 12.5) where there was considerable building activity in the last two decades of the 19th Century. In Accrington over 40% of present dwelling stock is considered suitable for rehabilitation, compared with the average of 18% for the whole Area. In Great Harwood, Rishton (Figure 12.5) and Darwen (Figure 12.4) only a small proportion of the present dwelling stock will require attention. The figures for Darwen reflect the high rate of slum clearance that has been achieved recently. Over the years 1961-66, 3.8 houses per 1,000 population were demolished or closed each year in Darwen compared with rates of 1.B per 1,000 in the Blackburn Area and 2.1 houses per 1,000 in the subregion. The total of over 23,000 dwellings requiring attention in Blackburn, 64% of present dwelling stock, covers



12.3 BLACKBURN CB HOUSING AND INDUSTRY

INDUSTRIAL AREAS	
Areas likely to remain in present use	▭
Areas with possibility of change of use	□
Possible future development areas	▥
LA boundary	⋯

RESIDENTIAL AREAS	
Housing scheduled for clearance	▩
Housing likely to be demolished before 1991	▦
Housing requiring rehabilitation to survive until 1991	▒



12.4 DARWEN MB : HOUSING AND INDUSTRY

almost all the dwellings built at densities of more than 15 houses to the acre.

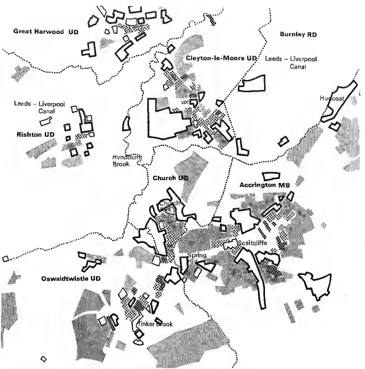
INDUSTRY

12.15 There is an almost continuous band of industrial premises along the Canal in Blackburn and extending to the south-east of the town centre (Figure 12.3). The majority of these premises are fully occupied and in sound condition. There are some 'soft' premises along the Canal between Audley and Eanam and at Nova Scotia. Industrial premises at Brookhouse and to the west of the town centre are likely to be redeveloped as renewal of the surrounding residential areas proceeds. The remaining industrial premises in Blackburn are predominantly fully occupied. Those at Witton, Skew Bridge, Whitebirk and Blackamoor are in particularly good condition, with good road access and space for expansion.

12.16 Industrial premises in Darwen are generally fully occupied although sites are often limited by topography and road access is difficult (Figure 12.4). Less than one-tenth of the industrial premises in Accrington may be considered 'soft'. (Figure 12.5). Most factories there are in textile, textile engineering and engineering use and are fully occupied. Sites are level and of reasonable size but road access is usually difficult. Industrial premises in the towns around Accrington are generally occupied and in good condition, with the exception of those on the Tinker Brook in the southern part of Oswaldtwistle and the site where the former finishing works at Church Kirk have been demolished. Most of the factories are small with the significant exception of the English Electric factory at Clayton-le-Moors. Road access is often poor.

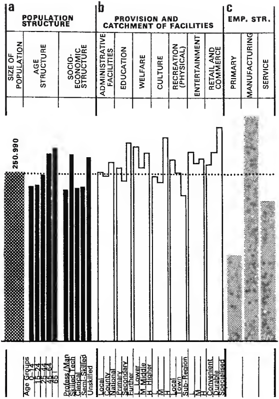
FACILITIES

12.17 The proportion of the population of the Blackburn Area in age groups over 45 is higher than the county average and lower in the 25 to 44 age groups. The occupation structure shows a preponderance of skilled and unskilled manual workers.



12.5 ACCRINGTON MB : HOUSING AND INDUSTRY

INDUSTRIAL AREAS		RESIDENTIAL AREAS	
Areas likely to remain in present use	▭	Housing scheduled for clearance	▩
Areas with possibility of change of use	□	Housing likely to be demolished before 1991	▦
Possible future development areas	■	Housing requiring rehabilitation to survive until 1991	▨



12.6 BLACKBURN AREA COMPARED WITH LANCASHIRE in structure of population, facilities and employment.

··········· Lancashire norms for same population.

The overall provision of facilities is comparable with the county average in numerical terms (Figure 12.6). There are good facilities for further education with recently built colleges in Blackburn and Accrington which are well situated with regard to accessibility from the Area. There is also a relatively high provision of welfare facilities with several hospitals concentrated in the area between Blackburn and Clitheroe. The cultural and entertainment facilities are slightly higher than the county average. The most striking feature is the large number of dramatic and cultural societies, particularly in Accrington, where they amount to almost ten times the county average. This may reflect the higher proportion there of professional, managerial and clerical workers than in the remainder of the Area. The Area as a whole is well provided with shopping facilities.

HOUSING

12.18 Growth in the Burnley Area took place at a later period than in the Blackburn Area (Paragraph 4.9) and the number of houses requiring demolition or rehabilitation is therefore lower (Table 12.4). The target level of demolition to 1991 amounts to 57% of the total present dwelling stock in Burnley County Borough (Figure 12.8), but this is related to the low level of rehabilitation foreseen which covers only 2% of total dwelling stock compared with the average of 13% for the whole Area. If the proposed rehabilitation scheme for the St. Matthew's Street area were to prove successful, the number of dwellings considered suitable for rehabilitation might therefore be increased. High levels of demolition are also foreseen for Burnley Rural District and Barrowford and low levels for Colne, Nelson and Padiham (Figure 12.9), again reflecting the different periods at which major growth took place.

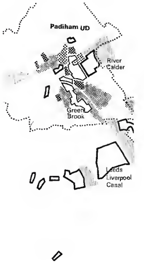
INDUSTRY

12.19 Industrial premises in Burnley County Borough (Figure 12.8) along the Canal at Rosegrove and Daneshouse on sites of up to five acres are mostly in non-textile use and good condition. Sites are level with room for some expansion at Rosegrove and have reasonable road access. Many of the smaller premises along the Canal at Whittlefield and to the south and west of the central area along the Canal and the River Calder are under-occupied. Premises in Stoneyholme and adjoining the railway are in reasonable condition and road access will be improved with the construction of the Inner Ring Road. The recently built factories on large, level sites on the Eastern Avenue Estate have good road access and room for expansion. Industrial premises in Padiham along the Green Brook are mostly on small sites with poor road access and are in many cases under-occupied, (Figure 12.7). Premises adjoining the River Calder are in better condition and have reasonable road access; large new premises have been erected and diversion of the river has made land available for further building. Industrial premises in Brierfield and Colne (Figure 12.9) are fully occupied and in good condition, with the exception of those in the Haverholt Area of Colne. Industrial premises in Nelson (Figure 12.9) are similarly occupied and in good condition with the exception of those in the Walverden Park Area and along the south bank of the Canal (though not at Seedhill). Premises in Barrowford and Trawden are generally small with poor road access and are in mixed condition and occupation.

FACILITIES

12.20 In the Burnley Area a significantly lower proportion of the population is in the economically active age groups and a higher proportion over retirement age than in the Blackburn Area (Figure 12.10) The occupation structure also differs in containing fewer of the managerial and professional classes, fewer clerical and unskilled workers, but more skilled workers. The quantitative standard of facilities is comparable to the county average and similar to that in the Blackburn Area. The most striking feature is the generally high provision of entertainment facilities which are concentrated in Burnley County Borough. There are more working men's and social clubs than in the Blackburn Area but fewer dramatic and cultural societies.

12.7 PADIHAM MB : HOUSING AND INDUSTRY



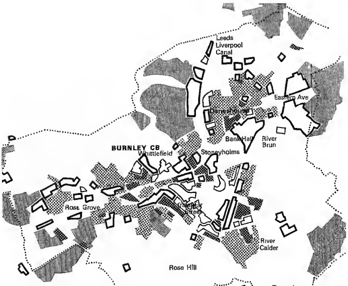
12.8 BURNLEY CB : HOUSING AND INDUSTRY

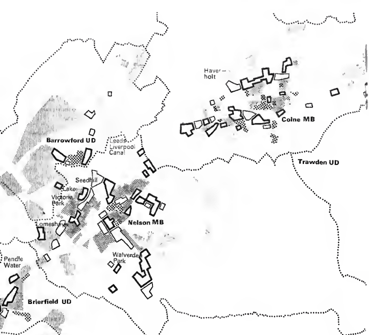
RESIDENTIAL AREAS

Housing scheduled for clearance	▩
Housing likely to be demolished before 1991	▨
Housing requiring rehabilitation to survive until 1991	░

INDUSTRIAL AREAS

Areas likely to remain in present use	▭
Areas with possibility of change of use	□
Possible future development areas	▥





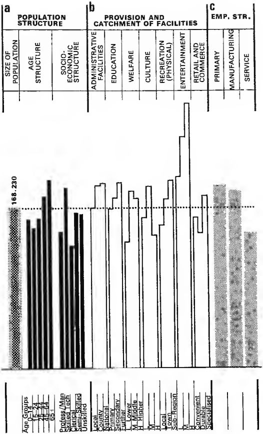
12.9 NELSON MB : HOUSING AND INDUSTRY
COLNE MB

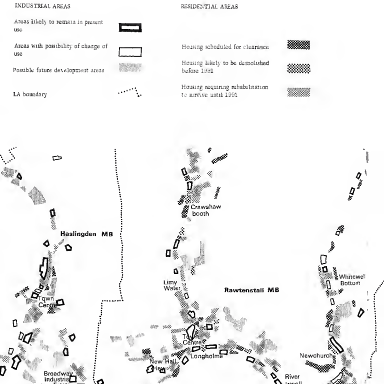
RESIDENTIAL AREAS	
Housing scheduled for clearance	▩
Housing likely to be demolished before 1991	▨
Housing requiring rehabilitation to survive until 1991	▒

INDUSTRIAL AREAS	
Areas likely to remain in present use	▬
Areas with possibility of change of use	☐
Possible future development areas	▥
LA boundary	⋯

12.10 BURNLEY AREA COMPARED WITH LANCASHIRE in structure of population, facilities and employment.

••••••••••••••Lancashire norms for same population.




INDUSTRIAL AREAS
Areas likely to remain in present use
Areas with possibility of change of use
Possible future development areas
LA boundary
RESIDENTIAL AREAS
Housing scheduled for clearance
Housing likely to be demolished before 1981
Housing requiring rehabilitation to survive until 1991
Haslingden MB
Town Centre
Broadway Industrial Estate
River Ogden
Crawshaw booth
Limy Water
Rawtenstall MB
Town Centre
New Hall Hey
Longholme
River Irwell
River Irwell
Whitewell Bottom
Newchurch
Waterfoot
Bacup M
Sta

The Rossendale Area

HOUSING

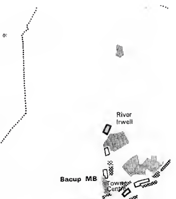
12.21 The peak period of house-building occurred at an earlier date in Rossendale than in the other Areas and the ratio of slum clearance to house-building has been consistently higher. Over the years 1961-66 demolition and closure in Rossendale was at a rate of 4.6 houses per year per 1,000 people whilst in the whole study area the rate was only 2.1 houses. The levels of demolition will be highest in Bacup and lowest in Rawtenstall, but because of the progress already made will affect only 20% of the present dwelling stock compared with 30% for the whole sub-region (Figure 12.11). Rehabilitation in Haslingden and Rawtenstall will require to be at a higher level than the average for the subregion which will also be above the level required for Bacup.

INDUSTRY

12.22 The industrial premises in the valley west of Haslingden are still mainly in textile use and fully occupied although the more remote the premises the more likely they are to be under-occupied (Figure 12.10). Premises to the east and south-east of Haslingden are mainly in textile use and fully-occupied and there are some new factories on the Broadway Estate. Access to these sites in Haslingden will be greatly improved when the Edenfield-Rawtenstall Level Crossing By-pass and the Haslingden By-pass are completed (Fig. 6.8). The majority of the industrial premises in Rawtenstall and Bacup are still used by textiles, felt and footwear firms. While those along the east/west valley of the River Irwell are generally fully occupied those in the north/south valleys are often under-occupied. Road access is generally difficult.

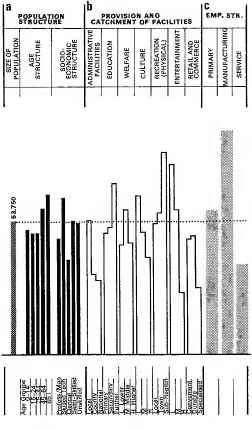
FACILITIES

12.23 The population of the Rossendale Area is very similar to that of the Burnley Area in age structure and occupation, except that there is a higher proportion of people in the 15-24 years age group (Figure 12.12). However, because of its smaller total population, the Area is not as well provided with facilities as are the others, and for shopping purposes in particular it is often necessary to make a journey outside the Area. Rossendale is, however, well provided for in welfare, having two hospitals and six clinics and in having a good provision of libraries, cultural societies, local assembly halls, pubs, clubs, playing fields, bowling greens and swimming pools.



12.11 HOUSING AND INDUSTRY
Haslingden M.B., Rawtenstall M.B. Bacup M.B.

12.12 ROSSENDALE AREA COMPARED WITH LANCASHIRE
in structure of population facilities and employment.
·············· Lancashire norms for same population.



Development Potential

12.24 Residential densities and dwelling occupancy rates have been falling steadily since the 19th Century. Between 1951 and 1961 gross residential density fell from 32.8 to 32.56 people to the acre in the Burnley Area, from 29.0 to 28.8 in the Blackburn Area and from 27.7 to 27.1 in the Rossendale Area. This trend of falling density applies also to industry. The multi-storey spinning mills characteristic of the labour-intensive cotton industry of the 19th Century may be contrasted with present single storey industrial buildings in which, with improved organisation and a greater degree of mechanisation, increased productivity may be achieved by a much smaller labour force. It is probable that this trend will continue in the future so that even if population were to remain static an increased urban acreage would be required.

12.25 Although a large quantity of residential and industrial land is likely to become available for redevelopment before 1991, much of it will be in small fragmented parcels. This is the result of the pattern of town development which was discussed in Section 6 and leads to problems of redevelopment. Where residential and industrial sites become available together it may be possible to recast the present land use pattern and, in particular, to provide the open space in proximity to central areas which is at present lacking. A further difficulty arises from the fact that some sites, particularly in Rossendale, may be on slopes where it is uneconomic to redevelop. Several cleared sites in Bacup, for instance, which has a particular shortage of suitable building land, have had to be laid out as open space for this reason. The redevelopment of residential sites consequently results in a net reduction of the dwelling stock for this reason in addition to reductions in density. The total amount of land which could become available through clearance by 1991 is shown in Table 12.5. These areas are made up of property scheduled for clearance by the local authorities together with that which we have assessed as requiring demolition by 1991.

12.26 The following categories of land at present undeveloped will also become available for development before 1991 :-

TABLE 12.5 SITES AVAILABLE THROUGH CLEARANCE (ACRES)

	By 1971 Non-Industrial	Industrial	By 1991 Non-Industrial	Industrial	Total Non-Industrial	Industrial
Blackburn Area	548.5	10	537.5	41	1086	51
Burnley Area	133.5	-	485	-	618.5	-
Rossendale Area	103.5	-	10	-	113.5	-
North East Lancashire Subregion	785.5	10	1032.5	41	1818	51

a) land carrying outstanding planning permission
b) land zoned for development in the Town Map (this does not apply to Rossendale which lacks a Town Map)
c) land where development has been or is being considered by local authorities

The total areas in these three categories are shown in Table 12.6

12.27 In order to find the total land available for future development in the subregion we have also made an assessment of land not included in the previous categories. This land, with that in categories (b) and (c) above, comprise the 'possible future development areas' in the preceding town diagrams. The criteria we have adopted were that sites for industrial development should be below the 750 feet contour and with slopes not greater than 1:25 and sites for non-industrial development should be below the 800 feet contour with slopes not greater than 1:10 and not directly overlooking major industrial sites. Areas of landscape preserved by statute (see Figure 5.4) were excluded. Table 12.7 shows that the total land available, including that falling within our criteria, amounts to 6,869 acres for non-industrial development and 2,394 acres for industrial development. We would stress, however, that these totals are in part dependent on clearance of existing development and that undeveloped land would require a more detailed examination before its development potential was determined with certitude. The Rossendale Area is severely limited in the extent of potential industrial land available. It has only one acre per 4,200 people where Burnley has one acre per 170 people and Blackburn one per 166. Rossendale also has slightly less non-industrial land - one acre per 76.5 people while Burnley has one per 67 and Blackburn one per 63.

12.28 Some 12% of the non-industrial land and 7% of the industrial land in Columns 1 to 4 of Table 12.7 falls below the standard of slope we adopted in the previous paragraphs. In other words, a significant proportion of the development, both public and private, which is likely to take place in the next few years, will be on sites which are not suitable according to our set of criteria. If this land is excluded the overall area of building land suitable for development amounts to 8,579 acres - 6,239 acres for non-industrial and 2,340 acres for industrial development. These figures include sites to be released by clearance.

Future Housing Conditions

THE SUBREGION

12.29 The number of dwellings that will be erected in the subregion in the future will result from the housing demand of the population rather than its

TABLE 12.6 SITES PROPOSED FOR DEVELOPMENT (ACRES)

	Permitted Non-industrial	Industrial	Zoned Non-industrial	Industrial	Considered Non-industrial	Industrial	Total Non-industrail	Industrial
Blackburn Area	578	105	331.5	87	916.5	153	1821	345
Burnley Area	149.5	52	246	270.5	740	46.5	1135.5	369
Rossendale Area	190.5	-	-	-	245	13	435.5	13
North East Lancashire Subregion	913	157	577.5	357.5	1901.5	212.5	3392	727

TABLE 12.7 TOTAL LAND AVAILABLE FOR DEVELOPMENT

	1 Table 12.5 Non-industrial	2 Industrial	3 Table 12.6 Non-industrial	4 Industrial	5 Recommended Non-industrial	6 Industrial	7 Total Non-industrial	8 Industrial
Blackburn Area	1086	51	1821	345	730	984	3237	1380
Burnley Area	618.5	-	1135.5	369	763	632	2517	1001
Rossendale Area	113.5	-	435.5	13	166	-	715	13
North East Lancashire Subregion	1818	51	3392	727	1659	1616	6869	2394

Bacup. Housing which was set into the hillside is being demolished and replaced by a grassed bank.

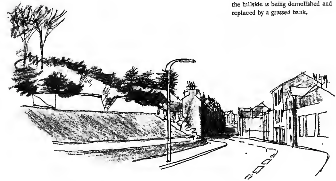


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TABLE 12.8 TENURE OF DWELLINGS : 1961 and 1966 CENSUS
(PERCENTAGE OF TOTAL HOUSING STOCK)

	1961	Rented from		1966	Rented from	
	Owner Occupied	Local Authority	Privately Rented	Owner Occupied	Local Authority	Privately Rented
Blackburn CB	62	15	21	64	19	16
Accrington MB	63	15	20	66	14	16
Church UD	55	17	24	-	-	-
Clayton-le-Moors UD	59	11	26	-	-	-
Clitheroe MB	52	22	21	-	-	-
Darwen MB	72	13	12	75	15	8
Great Harwood UD	72	8	18	-	-	-
Oswaldtwistle UD	67	8	21	-	-	-
Rishton UD	73	4	18	-	-	-
Blackburn RD	70	10	12	78	9	8
Clitheroe RD	43	7	23	-	-	-
Sub-Total Blackburn Subregion	64	14	18	-	-	-
Burnley CB	58	16	23	63	18	17
Barrowford UD	63	10	24	-	-	-
Brierfield UD	72	11	16	-	-	-
Colne MB	58	23	17	62	26	10
Nelson MB	70	14	15	72	13	10
Padiham UD	50	13	23	-	-	-
Trawden UD	73	8	15	-	-	-
Burnley RD	67	3	21	75	4	16
Sub-Total Burnley Subregion	62	15	20	-	-	-
Bacup MB	46	21	31	50	25	23
Haslingden MB	52	22	21	-	-	-
Rawtenstall MB	44	25	25	50	30	18
Sub-Total Rossendale Subregion	47	23	26	-	-	-
Grand Total North East Lancashire	61	15	20	-	-	-
Lancashire Administrative County and County Boroughs	45	23	28	50	26	22

Notes to Table 12.8

1. Percentages do not always add up to 100% because tenures such as tied cottages are excluded and census response was not complete.

2. Local Authorities for areas with less than 15,000 population were excluded from the 1966 census.

housing need. Housing need may be measured by the extent to which the existing housing stock falls short in either quantity or quality of providing sufficient accommodation at a certain minimum standard, irrespective of the ability of the population to afford it. The actual housing demand, on the other hand, will be a balance between what the population needs and what it can afford. Housing conditions and the satisfaction of this demand in the future will be determined by the interaction between demographic considerations (future population size and household formation rates), economic considerations (what the population and local authorities can afford to spend) and planning considerations (clearance rates, location, environment and land availability). Demographic considerations were discussed at length in Section 7. Land availability has already been considered and the remaining planning considerations are discussed in the succeeding paragraphs. In the time available however, it has not proved possible to consider the economic implications of the future housing programme as fully as we had hoped.

12.30 The number of dwellings that will have to be built in the future cannot be calculated merely from the probable future size of the population. Housing projections must, for instance, allow for the proportion of the population living in houses, as distinct from institutional buildings, which at present varies from 97% in the Blackburn Area to 99% in Rossendale. Projections must also allow for the proportion of houses remaining vacant at any time, which may be between 2% and 5%, and also for the likely household formation rate and the average household size. The latter has been falling steadily and in 1966 was about 2.7 persons per dwelling. Our estimates of future dwelling requirements take account of all these variables and are discussed later for each Area in the subregion.

12.31 At present there is a large stock of 19th Century terraced houses in the price range £400 to £1,750 compared with £3,350 for a new semi-detached house of similar size. The capital cost level of old dwellings is thus of the same order as the annual wage of the adult worker. In the Blackburn and Burnley Areas many more people have the opportunity to become owner-occupiers than the national or county averages, as shown in Table 12.8. The age of the housing stock in these Areas is also reflected in the low proportion of housing by local authorities who did not enter the field until after the peak of house-building in North East Lancashire had been passed. In the Rossendale Area, however, the pattern of tenure is close to the county and national averages and the reasons for this will be discussed in Paragraph 12.40. A high proportion of the stock of older, cheaper property which will be demolished by redevelopment is in owner-occupation. A smaller proportion is privately rented and this stock is unlikely to survive beyond 1991 in its present condition. Full cost rents for privately owned accommodation are only fractionally less than the annual mortgage charges for the purchase of housing when high interest rates prevail. Private enterprise therefore can do little on its own to provide new housing at rents which the majority of people can afford. The burden of providing replacement accommodation as older property is demolished will thus fall jointly upon the private sector (houses for sale) and the public sector (houses to rent).

12.32 The rate at which housing is provided by the private sector in the future will, of course, depend upon the availability of land and planning permission as well as upon the level of demand. If the present structure of credit facilities continues in the future it is probable that only a relatively small proportion of the population of the subregion will be able to afford to purchase new accommodation. As redevelopment continues therefore the level of owner-occupation shown in Table 12.8 will gradually fall towards the average level for the county. The resulting demand for cheap rented accommodation might necessitate a significant increase in the local authority building programme which could have considerable economic effects on local authority resources.

12.33 Any gap between demand and supply of local authority housing will have to be filled by the continued occupation of dwellings that are at present substandard. The extent of the gap will determine the level at which an active policy of rehabilitation should be pursued. Costs of rehabilitation can be considerably less than those of rebuilding. A recent study* shows that it may be cheaper, for instance, to spend up to 60% of the cost of a new dwelling upon rehabilitating an old one, if it has a life expectancy of 15 years and interest rates are 7%, than to build afresh (see Table 12.9). If a rehabilitation policy were energetically pursued it might have both economic and environmental advantages. First it might act as a regulator for that critical area between housing need and housing demand where distress would be caused if the present ample stock of cheap housing in the subregion were dissipated and, secondly, it might do much to improve the environment in some of the more unprepossessing urban areas.

12.34 At present little progress has yet been made in the production and implementation of rehabilitation schemes with the notable exception of that under consideration for Burnley (see Paragraph 12.1B). If a rehabilitation policy is introduced then both its scope and timing will have to be carefully considered. A long delay in starting, or a very low rate of implementation is likely to result in a proportion of the

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* L. Needleman : The Economics of Housing, 1965.

TABLE 12.9 COSTS OF REHABILITATION
(L. Needleman : The Economics of Housing 1965)

Future length of life of the modernised	RATE OF INTEREST 3%	4%	5%	6%	7%	8%
	Percentage cost of new dwelling of similar size up to which rehabilitation is cheaper.					
5	12	16	20	24	27	30
10	22	29	36	41	46	51
15	31	40	48	54	60	65
20	39	49	57	64	70	75
30	51	62	71	77	82	86

TABLE 12.10 NORTH EAST LANCASHIRE : ESTIMATED HOUSING PROGRAMME 1967-71

	Population mid 1966	Dwellings April 1967	Demolition 1967-71	Construction 1967-71 LA	Private	Total	Total
Blackburn CB	101,790	37,217	2,500	4,919	1,288	6,207	40,924
Accrington MB	37,690	13,997	815	606	351	957	14,139
Church UD	5,870	2,037	165	148	-	148	2,020
Clayton-le-Moors UD	6,340	2,318	152	162	75	237	2,403
Clitheroe MB	12,630	4,561	195	204	260	464	4,830
Darwen MB	29,000	10,689	400	400	500	900	11,189
Great Harwood UD	10,640	3,950	90	132	235	367	4,227
Oswaldtwistle UD	13,060	4,982	83	267	450	717	5,616
Rishton UD	5,440	2,084	9	12	250	262	2,337
Blackburn RD	18,750	5,637	10	-	1,081	1,081	6,708
Clitheroe RD	9,580	2,241	-	6	30	36	2,277
Sub Total Blackburn Area	250,790	89,713	4,419	6,856	4,520	11,378	96,670
Burnley CB	78,380	27,420	1,528	1,587	1,520	2,837	28,729
Barrowford UD	4,670	1,980	40	40	175	215	2,159
Brierfield UD	7,280	2,711	16	-	50	50	2,745
Colne MB	18,990	7,382	133	223	221	444	7,693
Nelson MB	30,980	12,060	250	-	185	185	11,995
Padiham UD	10,210	3,659	43	-	-	-	3,616
Trawden UD	1,860	783	56	40	-	40	767
Burnley RD	15,860	6,570	75	134	792	926	7,421
Sub Total Burnley Area	168,230	62,569	2,141	2,024	2,673	4,697	65,125
Bacup MB	16,600	6,174	625	493	100	593	6,142
Haslingden MB	14,200	5,362	190	375	600	975	6,147
Rawtenstall MB	22,950	8,622	935	822	250	1,072	8,759
Sub Total Rossendale Area	53,750	20,158	1,750	1,690	950	2,640	21,048
Grand Total NE Lancashire	472,770	172,440	8,310	10,570	8,143	18,713	182,843

TABLE 12.11 NORTH EAST LANCASHIRE : ESTIMATED HOUSING PROGRAMMES 1972 - 1976

	Population 1971	Dwellings 1971	Demolition 1972-76	Construction 1972-76			Total Dwellings 1976
				LA	Private	Total	
Blackburn CB		40,924	2,500	3,353	1,250	4,603	43,027
Accrington MB		14,139	655	675	-	675	14,159
Church UD		2,020	165	182	-	162	2,017
Clayton-le-Moors UD		2,403	200	185	75	260	2,463
Clitheroe MB		4,830	155	124	253	377	5,052
Darwen MB		11,189	400	400	500	900	11,689
Great Harwood UD		4,227	90	90	235	325	4,462
Oswaldtwistle UD		5,616	80	151	450	601	6,137
Rishton UD		2,337	-	-	250	250	2,587
Blackburn RD		6,708	-	-	1,080	1,080	7,788
Clitheroe RD		2,277	-	-	30	30	2,307
Sub Total Blackburn Area	253,000	96,670	4,245	5,140	4,123	9,263	101,688
Burnley CB		28,729	1,500	1,515	750	2,265	29,494
Barrowford UD		2,159	40	40	175	215	2,334
Brierfield UD		2,745	-	-	50	50	2,795
Colne MB		7,893	135	135	220	355	7,913
Nelson MB		11,995	250	-	185	185	11,930
Padiham UD		3,616	71	-	-	-	3,545
Trawden UD		767	55	55	-	55	767
Burnley RD		7,421	75	75	759	834	8,180
Sub Total Burnley Area	168,000	65,125	2,126	1,820	2,139	3,959	66,958
Bacup MB		6,142	625	625	100	725	6,242
Haslingden MB		6,147	190	375	600	975	6,932
Rawtenstall MB		8,759	494	678	250	928	9,193
Sub Total Rossendale Area	53,000	21,048	1,309	1,878	950	2,628	22,367
Grand Total NE Lancashire	182,843	474,000	7,680	8,638	7,212	15,850	191,013

housing which might have been suitable for rehabilitation falling into a state in which demolition will become inevitable. Appendix H examines the possible effect of rehabilitation upon housing standards and facilities in two typical 19th Century residential areas, though without discussing the economic implications. This indicates that unless effort is concentrated on the carrying out of rehabilitation programmes over a period of only 2 or 3 years, rather than over a period of 5 years or more, there is likely to be only a limited result. A short intensive programme of rehabilitation would be more likely to produce a cumulative improvement in all aspects of living conditions by bringing a generally younger and more active group of people into decaying inner urban areas.

12.35 In the following paragraphs we discuss the possible future building programme for each Area of the subregion. In Table 12.10 there are estimates of future levels of building, both private and local authority, and of demolitions based upon individual assessments by local authorities for the period until 1971. We have estimated the figures for the following years up to 1976 and these are shown in Table 12.11. Because of the many factors which cannot be foreseen and which might produce considerable fluctuations, it has not been possible to project estimates further except for Blackburn and Burnley County Boroughs. These two large local authorities have a building programme of sufficient size to make possible some indication of future levels, although these will obviously be subject to very wide variations. The rates of building, demolition and rehabilitation will

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* L. Needleman : The Economics of Housing, 1965

also be compared with the target levels which, as we discussed in Paragraph 12.8, will be necessary to bring the dwelling stock up to a satisfactory standard. These estimates, which are summarised in Table 12.12, give an indication of the size of the housing problem, leaving aside any consideration of costs. They provide a yardstick against which the performance of the future housing programme may be judged.

THE BLACKBURN AREA

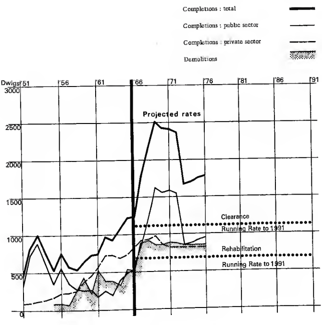
12.36 Between 1961 and 1966 migration trends show that four local authorities had more moves in than out. These are, in order of the size of migration, Blackburn RD, Oswaldtwistle UD, Rishton UD and Clitheroe RD. Blackburn CB had a considerable excess of emigrants over immigrants. This trend of movement to less urbanised areas is a general one which is likely to continue with increasing car ownership and rising standards of living. The demand for housing will not therefore be confined to the present urban areas but will increasingly affect the whole Area. The projected total building rate by 1969 is expected to be almost double that achieved in 1966, although it may fall thereafter. Much of the increase in dwelling stock is likely to be produced by a sharp rise in the local authority building programme. If these rates are actually achieved there may by 1976 be some 101,688 dwellings available in the Area for a population of about 253,000 (Table 12.11). The rate of demolition will reflect the progress achieved in housing but will probably still be below the target level described in the previous paragraph, averaged as an annual rate (Figure 12.13). Some 18,000 of the 26,725 dwellings assessed as requiring demolition may still be standing in 1976. As yet there are no rehabilitation proposals for the Area so that by 1976 the figure of 18,000 might be swollen by the addition of dwellings originally suitable for rehabilitation, but by that date becoming ripe for demolition.

12.37 The demographic projections in Section 11 show that there may be an additional population of 25 to 30,000 in the Area by 1991. The total land available for development shown in Table 12.7 which does not include potential land in the rural districts, shows that there should be a substantial reserve over

TABLE 12.12 DEMOLITION AND REHABILITATION

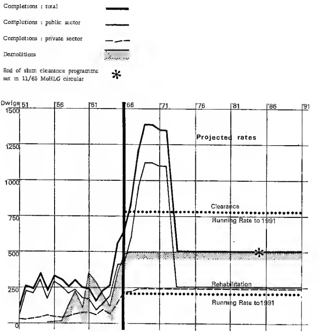
	Existing dwelling stock 1967	Slums standing 1967	Dwellings requiring demolition by 1991	Dwellings requiring rehabilitation by 1991
Blackburn Area	89,713	11,559	26,725	16,753
Burnley Area	62,569	2,566	19,400	8,426
Rossendale Area	20,158	3,176	4,079	4,057
North East Lancashire	172,440	17,301	50,204	29,236

12.13 BLACKBURN AREA : HOUSING



requirements Blackburn County Borough will experience the greatest demand for non-industrial land and also has the largest proportion of housing renewal to undertake. Figure 12.14 shows that there is likely to be a considerable increase in the local authority building programme in Blackburn County Borough which may reach a peak in 1969-70 at over four times the level of private buildings. The size of the housing programme and the present fragmented nature of land use in inner urban areas will make it necessary to select very carefully a plan of campaign which will secure the maximum overall improvement of the environment of the whole town as quickly as possible and for the minimum cost.

12.14 BLACKBURN CB : HOUSING

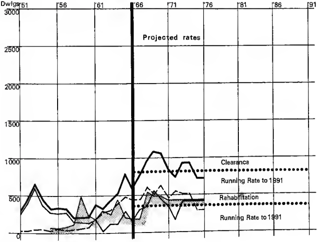


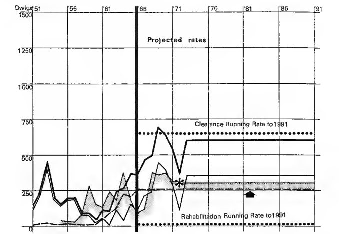
THE BURNLEY AREA

12.38 Immigration trends in the Burnley Area for the years 1961-66 do not show the same clear pattern of movement out of the large urban areas as in the Blackburn Area. However, the highest rates of private building in relation to population size over the same period were in Barrowford, Brierfield and Padiham areas which also showed a net gain of population by immigration (Figure 7.1). By 1976 there are likely to be an additional 4,000 dwellings in the Area, of which the greater part will probably continue to be provided by private enterprise (Figure 12.15). Although the population is not expected to increase greatly, 15,133 dwellings may still remain in 1976 of the total of 19,400 which is the 1991 target for demolition. While the total future rate of completions will probably equal the average rate of demolition which would be necessary to reach the target level, the actual demolition rate may be rather below this level. Only 13% of dwellings are estimated to be suitable for rehabilitation (Table 12.4) so that rehabilitation policy is of less importance for the Burnley Area than for the Blackburn Area where the proportion is 18%

12.39 By 1991 the population of the Burnley Area may increase by between 7,000 and 10,000. The amount of residential land available for development (Table

12.15 BURNLEY AREA : HOUSING





Completions : total ━

Completions : public sector —

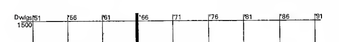
Completions : private sector – –

Demolitions ▨

End of slum clearance programme set in 11/65 MoHLG circular ✱

Building land exhausted ▲

12.16 BURNLEY CB : HOUSING



12.17 ROSSENDALE AREA : HOUSING

12.7) should be sufficient to meet the demands that might arise, although there is a much smaller reserve of land than in the Blackburn Area. The problem of land availability may become acute in Burnley County Borough since all building land may be exhausted by 1981 (Figure 12.16). Because of this, the problems of land use reorganisation in the inner urban area and a rate of clearance which is well below the target average level of demolition, a detailed re-appraisal of the building programme seems essential.

THE ROSSENDALE AREA

12.40 The population of the Rossendale Area has been declining since 1901 (Figure 4.1) and at a faster rate than in the other two Areas. Housing demand has not therefore been at a high level and the number of houses built has usually outnumbered those demolished (Figure 12.17). Over the years 1961-66, for instance, 166 houses were demolished or closed for every 100 built, compared with only 56 for every 100 built in the subregion. Building by the private sector has been much lower than that by the public sector and the level of owner-occupation is lower and of renting higher than in the rest of the subregion (Table 12.8). Considering only the requirements of the population of the Area future housing demand is therefore likely to be low. By 1976 there are likely to be 22,367 dwellings and the level of demolition may be higher than the target level for demolition averaged as an annual running rate (Figure 12.18). At present there are no proposals for rehabilitation although this option will, of course, remain open. Although there is less development land available in relation to population than in the other Areas (Paragraph 12.27) this should be sufficient to satisfy demands in spite of the loss of land through clearance on sites too steep to redevelop. In view of the relationship between Rossendale and the large conurbation to the south, this performance in housing seems very encouraging to the formation of closer ties southwards through the provision of housing for commuters. As a study of South East Lancashire is beyond our terms of reference we draw attention to this factor but are not able to discuss it in more detail.

Nelson: mixed forms of terraced housing changing with the slope.

CONCLUSIONS

12.41 Figure 12.18 shows that the housing programme of the subregion reached a peak of 2,000 dwellings a year in 1953 when the great proportion of building was by local authorities and dropped to a low point at about 800 dwellings in 1958. In 1959 the private sector began to provide a larger number of houses to contribute to the steady increase in production in recent years. It is expected that in the future local authority building will overtake private building to achieve a peak production of well over 4,000 houses a year in 1969, almost double the 1966 figure. While production is likely to drop after that it should continue at over 3,000 dwellings per year at least

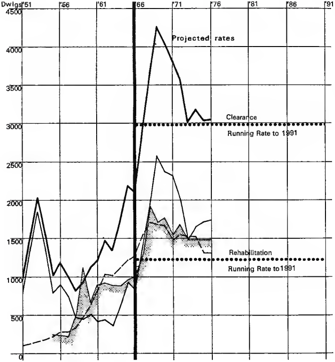
12.18 N.E. LANCASHIRE : HOUSING

Completions : total ━━━

Completions : public sector ───

Completions : private sector — — —

Demolitions ▒▒▒



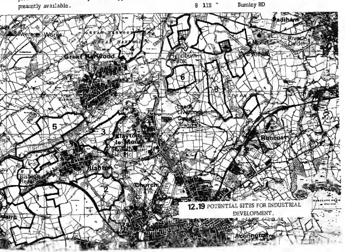
until 1976, which is substantially higher than the present level. There may be a substantial gap between the expected level of demolition and the target level necessary to clear the number of dwellings shown in Table 12.12.averaged as an annual running rate. The gap between target and achievement will have to be met by the continued occupation of dwellings which are at present sub-standard. If these houses could be brought up to a satisfactory standard, the number of houses requiring rehabilitation each year would have to be increased to almost double the target level for rehabilitation shown in Figure 12.18.

12.42 It will therefore be necessary to give considerable thought to the problems of rehabilitation as well as renewal - the Blackburn and Burnley County Boroughs which face the biggest problem of renewal have only a limited supply of undeveloped land within their boundaries. Unless these problems are tackled comprehensively, rather than piecemeal, the opportunity may be lost of achieving a significant improvement in the living conditions provided by these towns. The enactment of the present Town and Country Planning Bill in 1968 with its suggested 'structure', 'action area' and 'local' plans should provide a more satisfactory basis of approach than is presently available.

Future Industrial Land Use

12.43 A further problem is posed by the fragmented nature of land use in inner urban areas containing many industrial premises. Our examination of development potential shows that there is a sufficient quantity of large, level sites available in the sub-region to meet foreseeable requirements. Both Blackburn and Burnley County Boroughs have potential industrial sites of over 50 acres in extent. In Blackburn there are two sites totalling 165 acres. A further large site, at present zoned for industry, on Haslingden Road, has not been included because of its proximity to Fishmoor Reservoir. In Burnley there are four sites, totalling 305 acres. The following sites, shown in Figure 12.19, are clustered on the predominantly low-level ground between Blackburn and Burnley :-

Site 1	388 acres	Rishton UD (Site of 234 and 112 acres linked by a third site of 42 acres)
2	110 "	Rishton UD
3	97 "	Rishton UD
4	68 "	Great Harwood UD
5	244 "	Grear Harwood UD
6	104 "	Clayton-le-Moors UD
7	258 "	Burnley RD
8	112 "	Burnley RD



12.19 POTENTIAL SITES FOR INDUSTRIAL DEVELOPMENT.

12.44 Subject to detailed investigation these sites appear to be reasonably well suited to industrial development from the point of view of drainage and subsidence. Sites 1, 2 and 3 have satisfactory drainage at present. Sites 4, 5, 6 and 8 might require improvements to watercourses. Part of Site 7 will be required for the proposed realignment of the River Calder, which will lessen its vulnerability to flooding, and a further part for the extension of the existing sewage works. All the sites appear suitable for development from the point of view of subsidence, although old coal workings are present beneath most of them. Trial holes should therefore be bored for heavy buildings on Sites 3, 4, 6 and 7. Slightly greater care may need to be taken for Sites 1, 2, 5 and 8

12.45 The sites shown in Figure 12.18 are better suited for industrial use by reason of their size and gradient than several sites where development is likely to take place over the next few years. They are not, however, included in the approved Development Plan. The proposed development of unsatisfactory land may be attributed to the present fragmented local authority structure, which contributes directly to the problems faced by larger authorities. The present pattern of local government cannot always ensure that the development needs of the subregion are satisfied in the best possible manner. The recognition of need, the authorisation of development and the provision of financial resources are often divided among different authorities, and integrated effort is sometimes difficult to achieve.

Facilities in the Future

12.46 After job opportunities, housing conditions and the standard of the environment, a major factor affecting future standards of living in the subregion will be the range and quality of social and commercial facilities available. The degree to which these compare with the standard achieved in the remainder of the North West Region will have a considerable bearing on the relative attractiveness of the study area. The quality of facilities to serve the total population of towns of the three Areas and of the subregion will be particularly important for purposes of comparison since basic facilities at the local level within towns such as schools, playing fields and clinics will exist regardless of local prosperity although their quality might be less good than in other parts of the country.

12.47 In Paragraph 12.12 it was seen that the subregion was badly provided with facilities at the city scale for which journeys for specific purposes have to be undertaken to Manchester, Liverpool or Blackpool. It is improbable that in the future, assuming there were no new town, the subregion would be able to support such facilities. However, different Areas of the subregion might well have improved communications southwards (Paragraph 6.16) to Manchester and Liverpool for shopping and entertainment and to Blackpool, Bowland or the Pennines for entertainment or recreation. These trips may well increase in importance with rising car ownership.

12.48 A further problem for the future will be the changing development pattern of towns. Densities within towns are likely to decrease and population will tend to disperse from the major urban concentrations. Facilities are at present concentrated in or near town centres and inner urban areas and thus problems of location will arise. Considerable effort will be required in the future if the subregion is to cope merely with physical decay of buildings. In Burnley, for instance, the three swimming pools were built in 1887, 1902 and 1910, although the construction of a new pool there is now under consideration. In future the degree to which standards will still bear comparison with the county average will be dependent upon performance in coping with the obsolescence and maldistribution of existing facilities, as well as the provision of additional facilities to meet modern standards. The provision of facilities is likely to improve in the Blackburn Area where the present strength of facilities for welfare will probably continue. Some improvement is also likely in the Burnley Area where the present high level of entertainment facilities should continue. The future of Rossendale is less certain because much will depend on the growing linkages with towns to the south, outside the study area.

Climate and Air Pollution

12.49 We have seen in Section 5 that the climate of the study area in spite of being slightly worse than that of Preston or the coastal plain, does not in itself entirely justify its poor reputation. In fact, as far as weather is concerned the study area is much better off than many of the most favoured beauty spots of the Forest of Bowland, as well as having landscape not greatly inferior in value. There is an obvious and close connection, of course, between climate and topography and nothing can be done about this. These interact with a third factor of air pollution which decisively worsens living conditions and affects health but which can, however, be remedied. Air pollution in the study area is caused mainly by smoke produced by the incomplete combustion of fuels in domestic heating appliances, factory installations and power stations. Sulphur oxides are also produced by the combustion of sulphur-containing fuels such as coal, coke, oil and solid smokeless fuels.

12.50 Air pollution is directly related to the concentration of emission from the smoking chimneys of a high density residential area or a large power station, for instance, rather than to the physical extent of the urban area. The main cause will therefore be local, although in addition smoke produced by other towns drifting at high levels of the atmosphere may be brought down to ground level in certain weather conditions. The report on "Health and Climate" by the North West Economic Planning Council suggests that smoke drifts over the study area from Manchester, Bury, Bolton and Yorkshire under the clouds, and is thus frequently associated with particularly gloomy and depressing wet weather. A similar effect occurs over the central spine of towns stretching from west to east of the study area. In areas of pollution there is an observed reduction in the quantity of bright sunshine, particularly in winter, which the Planning Council estimate may amount to 15 or 20% of the total available, and also in the quality of sunshine by reducing the ultra-violet rays of the spectrum. Pollution can thus affect health as well as climate in valley-situations like that of the study area where persistent temperature inversion may prevent the dispersion of pollutants. It can also affect agricultural productivity as the most productive grasses in pasture-land may not be able to persist. More obvious effects of pollution are those which it has on the appearance of the everyday environment. Vegetation is stunted, buildings quickly appear drab, go unpainted and become uncared for and their structure gradually deteriorates. The subtly discouraging effects of dirty air on the whole population cannot be lightly discounted. As Smoke Control Orders are implemented and inefficient industrial plants and power stations burning sulphur-containing coal dug in the subregion are superseded, all these factors will, of course, be mitigated.

12.51 Areas in which the national average urban concentrations of smoke and sulphur oxides are seriously exceeded have been listed as "black" by the Ministry of Housing and Local Government. The "black" areas of the subregion are shown in Table 12.13, which illustrates the progress which has been achieved in the implementation of Smoke Control Orders under the Clean Air Act 1956. Although pollution is declining there are still a substantial number of days each year when the national average figures of 200 microgrammes per cubic metre for smoke and sulphur oxide pollution are exceeded by as much as 2½ times. If the rate of improvement achieved by the "black" authorities between 1956 and 1966 is not considerably increased we estimate that, even allowing for the demolition that will have taken place, some 40% of residential premises may still be unimproved by 1981. Table 12.13 also shows that Burnley CB, Church UD and Padiham UD have already made substantial progress towards complete smoke control. In some of the local authorities to windward of the study area, particularly the smaller ones, a considerable amount remains to be achieved which, if it is not, will continue to hold back the whole subregion.

TABLE 12.13 SMOKE CONTROL ORDERS, IN 'BLACK' AREAS, 30th JUNE, 1967.

Local Authority	Total Premises	Total Premises Covered	% of Total Premises covered
Blackburn CB	44,994	9,224	20.5%
Burnley CB	31,014	15,848	51.1%
Accrington MB	15,343	1,534	10.0%
Colne MB	8,247	2,037	24.7%
Darwen MB	10,142	1,014	9.9%
Nelson MB	13,375	1,875	14.1%
Barrowford UD	1,972	Nil	-
Brierfield UD	2,810	527	18.4%
Church UD	2,498	1,437	57.9%
Clayton-le-Moors UD	2,517	Nil	-
Great Harwood UD	4,673	Nil	-
Oswaldtwistle UD	4,997	Nil	-
Padiham UD	3,939	1,674	42.5%
Rishton UD	2,718	Nil	-
Total	149,239	35170	23.6%

Public buildings in the centre of Burnley.
(The Police Station, left and Public Library, right.)

Section Thirteen

Town centres

TABLE 13.1 HIERARCHY MEASURES 1961

Blackburn	42
Burnley	39
Accrington	31
Nelson	30
Darwen	28
Colne	26
Clitheroe	26
Rawtenstall	26
Haslingden	25
Bacup	23
Padiham	18
Oswaldtwistle	16
Clayton-le-Moors	13
Brierfield	12
Rishton	11
Great Harwood	10
Church	10
Barrowford	8
Trawden	7

Source: Based on amount of selected shopping facilities (maximum = 42, minimum = 7)

TABLE 13.2 POINTS SYSTEM FOR RANKING SELF-SERVICE GROCERIES BY SALES SPACE

Over 2,000 sq. ft.	6 points
1,000 - 2,000 sq. ft.	3 points
300 - 1,000 sq. ft.	2 points
Up to 300 sq. ft.	1 point

13.1 As North East Lancashire consists of a large number of small towns, it is endowed with many commercial centres. This section examines retailing, administration and some of the other activities that make up a typical town centre.

The Present Hierarchy of Retail Centres

13.2 The extended settlement pattern is such that there is no single centre acting as a focus for the whole of the subregion. As far as shopping is concerned, one indication of the importance of a centre is obtained by studying the extent to which it has developed trade in durable goods for which the customer is likely to travel some distance. Another measure of the relative importance of centres allocates points based on the number of clothing shops, banks and so on. On this system a town can score from 7 to 42 points. The application of this to the towns of North East Lancashire produces the ranking shown in Table 13.1.

13.3 In the food trades, large supermarkets with their considerable advantages of price and selection are encouraging people to travel to the larger centres. We have therefore studied the distribution of food trades (generally called convenience goods trades), and tried to measure on this basis the attractiveness of each centre. We constructed an index derived from the presence or absence of selected multiple food retailers in each town. It became clear, however, that this was not a satisfactory measure since such retailers tended to be localised, having perhaps half a dozen branches in a small town but none at all in a larger town. A better measure was obtained by listing all the self-service groceries in the area with a points system, indicating their size in terms of sales space (Table 13.2).

13.4 This method produced a hierarchy very similar to that constructed for Durable Goods. In Table 13.3 the centres are arranged in the order given to them in Table 13.1. Nelson and Bacup are out of step, having far lower values than one would have expected, while Padiham and Great Harwood are graded higher than they are in Table 13.1. These variations suggest that such hierarchy measures are not entirely satisfactory, but are still a considerable improvement on other measures tried. We later developed a set of statistical relationships which gave a reasonably good description of the distribution of convenience goods trade in the area (Table 13.3).

The Present Characteristics of Retail Trade

13.5 There is evidence that the postwar changes in retailing which have occurred in other parts of the country have been relatively slow to develop in North East Lancashire, as indeed they have been throughout the North West Region. Small independent shops still form a larger proportion of all shops in the subregion than they do elsewhere In 1961, independent shops accounted for 80% of all establishments and 62% of turnover in the country as a whole. In North East Lancashire, however, these figures were 84% and 64% for the six largest towns, and for the subregion as a whole can be estimated at about 90% and 70% respectively. Most of these shops were isolated corner shops which according to a recent survey* accounted for some 27% of all shops. This compares with a range of 8% - 12% for five towns in the South of England that were surveyed in 1956**. Over half of such shops were general groceries or confectioners.

13.6 As a corollary, supermarkets and self-service groceries have been slower to develop, although the pace has accelerated considerably during recent years. Table 13.4 shows the result of a count (not necessarily comprehensive) which indicates that North East Lancashire is still relatively under-colonised by such traders. This is in contrast to neighbouring parts of Lancashire where ratios are much nearer the national average. The gradual population decline has left a legacy of a large number of empty shops. An indication of the scale of this problem can be derived from a recent count which shows that some 15% of shops were empty - largely on arterial roads and on the fringe of the main shopping centres. We do not know how long such shops have been empty, but it certainly suggests that the decline in the numbers of shops has been above the rate for the country as a whole. Part of this decline is caused by population decline associated with slum clearance and, in one or two cases, with redevelopment schemes. Significantly, however, town centre schemes have not added much to the amount of retail floorspace available in the subregion.

TABLE 13.3 CONVENIENCE GOODS HIERARCHY MEASURES 1966

Blackburn	87
Burnley	75
Accrington	40
Nelson	19
Darwen	24
Colne	19
Clitheroe	13
Rawtenstall	18
Haslingden	16
Bacup	4
Padiham	22
Oswaldtwistle	7
Clayton-le-Moors	10
Brierfield	3
Rishton	2
Great Harwood	14
Church	3
Barrowford	2
Trawden	0

(Based on self-service groceries - see Paragraphs 13.4 and 13.5)

TABLE 13.4 SUPERMARKETS AND SELF-SERVICE GROCERIES 1966

	North East Lancashire	Great Britain
Supermarkets	16	2,750
Self-Service	134	17,750
Population (1,000s)	473	53,268
Supermarket + Self-Service per 1000	.32	.38

Source: Self-Service and Supermarket Directory 1967

TABLE 13.5 TURNOVER AND POPULATION 1950-61

Turnover (£ million)	1950	1961
Trawden UD and Rural Districts	1.5*	2.1
Remainder of Subregion	51.1	73.9
North East Lancashire	53.0	76.0
Resident Population (1,000s)	494	479
Turnover per resident (£)		
North East Lancashire	107	159
North West Region	114	160

Source: Census of Distribution and Services 1950 & 1961
* Figures for Trawden UD and for the Rural Districts are not covered by the 1950 Census.

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* W.F. Lever (University of Glasgow) unpublished Ph.D. Thesis

** J.S. Cheer, Town Planning Institute Journal 1957

Trends in turnover 1950-1961

13.7 With steadily rising incomes, there were substantial increases in turnover between the Census years 1950 and 1961. The increase of 43.5% in the subregion, not including Trawden UD and the Rural Districts, was much lower than the national figure of 86.5%. We assume that the difference is due to population decline. The total turnover at each date for retailing and selected service trades is shown in Table 13.5 from which it can also be seen that the per capita figure was much closer to the regional average in 1961 than in 1950. There could be several explanations for this. It may well be that people used to spend more money outside the subregion in 1950 than they did in 1961. Secondly, we may have under-estimated the turnover of shops in the rural districts in 1950, but hardly to the extent that this could be the whole explanation. Thirdly, there may have been a tendency for the response and coverage of the 1950 Census to be much poorer than in 1961. The fourth and, in our view, most likely explanation is that there was a large differential between the incomes and expenditure in the subregion and in the North West Region in 1950 which had been sharply reduced by 1961. This is not surprising in view of the dependence of the subregion on the low-paying textile industry in 1950, and the extent to which this had been reduced by the end of the decade. There were, however, substantial differences in the rate of increase in turnover between one town and another, and these are shown in Table 13.6. Again the pattern generally follows that of population change except that the two largest centres have held their own despite population declines.

13.8 We attempted to measure changes in catchment by expressing retail and service trades in terms of a theoretical shopping population. The 1950 regional expenditure per head was divided into the turnover of each town to give a measure of the population served by that town. This can then be compared with resident population to see whether each town imports shoppers and thus acts as a centre for people living elsewhere, or whether it is an exporting area. The same process was repeated with the 1961 figures, which were then adjusted so that the export figure for North East Lancashire was the same in both cases. Comparing the import and export figures for the two years gives an indication of how the relative positions of each town had changed. The results, shown in Table 13.7 in fact suggest that the shopping habits were remarkably stable. The only significant differences were that Accrington's position improved - partly as a result of population increases in Church - while that of Colne deteriorated. There was also a tendency for the smaller towns to export more trade, though the figures are not sufficiently accurate to enable precise conclusions to be drawn.

TABLE 13.6 RETAIL AND SERVICE TRADES TURNOVER 1950-61

	Turnover 1950 (£ 1,000s)	Turnover 1961 (£ 1,000s)	% Change 1950-61	Relative* Change
Blackburn	14157	20662	45.9	2.4
Burnley	10555	15081	42.9	-0.6
Accrington	4505	7467	65.7	22.3
Bacup	1656	2219	34.0	-9.5
Barrowford	285	458	60.7	17.2
Brierfield	591	698	18.1	-25.4
Church	303	427	40.9	-2.6
Clayton-le-Moors	565	1076+	90.4+	47.0+
Clitheroe	1743	2259	29.6	-13.9
Colne	2569	2988	16.3	-27.2
Darwen	2936	4173	42.1	-1.4
Great Harwood	991	1325	33.7	-9.8
Haslingden	1209	1740	43.9	0.4
Nelson	4416	5891	33.4	-10.1
Oswaldtwistle	1072	2023+	88.7+	45.2+
Padiham	913	1457	59.6	16.1
Rawtenstall	2629	3420	30.1	-13.4
Rishton	453	581	28.3	-15.2
TOTAL	51548	73945	43.5	0

* i.e. The town rate of growth minus the North East Lancashire rate

+ Figures for Clayton-le-Moors and Oswaldtwistle in 1961 are inflated by the inclusion of milk roundsmen's takings

The Present Town Centres

13.9 The town centres were built up predominantly in the second half of the 19th Century and 20th Century redevelopment has only recently made an impression. The major redevelopments completed have been predominantly commercial ones, and particularly in the smaller centres, there has been no basic improvement in the 19th Century heritage of badly arranged land use patterns, vacant property and inadequate provision for road and public open space. Centres are generally well served by bus stations, but the location of the railway stations is sometimes less convenient. There are considerable problems of congestion resulting from trunk roads and main traffic roads cutting through centres, and from the lack of off-street service access to shops. Considerable future redevelopment will be necessitated by the problems of age and the deteriorating structural condition of buildings, and by road congestion as vehicle ownership and usage increase.

BLACKBURN

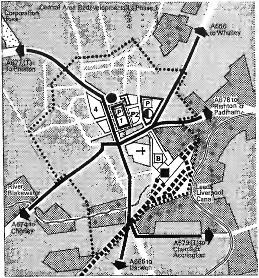
13.10 The town centre of Blackburn covers approximately 150 acres (Figure 13.1) and in 1961 contained 254 of the total of 2,054 shops in the town. In 1964 a further 330 shops and stalls were completed in the new market development and a further 166,855 square feet of retail floorspace were

TABLE 13.7 SHOPPING POPULATION 1950-1961

	Shopping Population		Resident Population		Imports of Shoppers	
	1950	1961*	1950	1961	1950	1961
Blackburn	123.6	120.6	111.5	106.1	12.1	14.5
Burnley	92.8	87.6	84.9	80.6	7.9	7.0
Accrington	39.3	43.5	40.4	41.0	-1.1	2.5
Bacup	14.5	12.9	18.6	17.3	-4.1	-4.4
Barrowford	2.5	2.7	4.6	4.5	-2.1	1.8
Brierfield	5.2	4.1	7.1	7.0	-1.9	-2.9
Church	2.7	2.5	5.2	5.9	-2.5	-3.4
Clayton-le-Moors+	4.9	6.3	6.7	6.4	-1.8	-0.1
Clitheroe	15.2	13.2	12.5	12.0	2.7	1.2
Colne	22.4	17.4	20.8	19.4	1.6	-2.0
Darwen	25.6	24.4	31.0	29.5	-5.4	-5.1
Great Harwood	8.6	7.7	11.0	10.7	-2.4	-3.0
Haslingden	10.6	10.2	14.7	14.4	-4.1	-4.2
Nelson	38.5	34.4	34.7	32.0	3.8	2.4
Oswaldtwistle+	9.4	11.8	12.4	11.9	-3.0	-0.1
Padiham	8.0	8.5	10.1	9.9	-2.1	-1.4
Rawtenstall	23.0	20.0	25.3	23.9	-2.3	-3.9
Rishton	4.0	3.4	5.9	5.4	-1.9	-2.0
	450.8	431.2	457.4	437.9	-6.6	-6.7

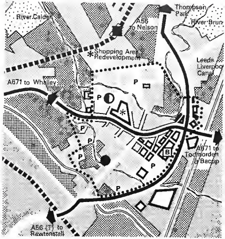
* Adjusted to make imports equal for North East Lancashire in 1950 and 1961 (see Paragraph 13.8)

+ Figures for Clayton-le-Moors and Oswaldtwistle in 1961 are inflated by the inclusion of milk roundsmen

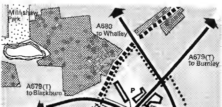


13.1 BLACKBURN CB : TOWN CENTRE

Town centre boundary	••••••	Rail lines	■■■■■
Non-Industrial areas	░	Railway station	■
Industrial areas	▨	Bus station	B
Canals	═	Parking/ground level	P
Rivers	~	Parking/upper level	P
Town Hall	●	Recent development	▭
Market Hall	◐	Proposed development	⌐ ¬
Principal church	✝	Pedestrian precinct	⌐ ¬
Principal shopping frontages	└─┘	Public open space	∴
Principal roads	▬		



13.2 BURNLEY CB : TOWN CENTRE



13.3 ACCRINGTON MB : TOWN CENTRE

provided in the first phase of the Central Area Redevelopment. 135,000 square feet are to be provided in the second phase and further floorspace, together with new civic buildings, in later phases. Car parking facilities are integrated into this scheme and covered shopping malls are provided. In addition to shops and offices the main town facilities for further education, entertainment and recreation are contained in the centre together with sizeable industrial and residential areas. There is a present deficiency of public open space, now provided only by that surrounding the Cathedral. The railway and bus stations are well sited in relation to each other and to the shopping centre, but communications within the centre need further co-ordination and vehicle-pedestrian conflict. There are at present 2,113 parking spaces and a further 1,200-1,300 spaces will be provided as redevelopment takes place.

KEY FOR FIGS. 13.2 & 13.3

Town centre boundary	••••••
Non-Industrial areas	▨
Industrial areas	▩
Canals	═
Rivers	─
Town Hall	●
Market Hall	◐
Principal church	✚
Principal shopping frontages	└─┘
Principal Roads	▬
Parking/ground level	P
Rail lines	■■■■
Railway station	■
Bus station	B
Recent development	▭
Proposed development	┌ ─ ┐
Pedestrian precinct	┌┄┐
Public open space	⁙

BURNLEY

13.11 The town centre of Burnley covers some 35 acres (Figure 13.2) and in 1961 contained 236 of the total of 1,611 shops in the town. Between 1958 and 1967, 233,520 square feet of new floorspace was erected of which 85% was for shopping purposes. It is expected that a further 266,000 square feet will be developed by 1975. The central area is well provided with entertainment facilities but lacks open space at a convenient distance and also educational and recreational facilities. The bus station is better sited in relation to the administrative and entertainment areas than to the main shopping area. The railway station is inconveniently sited on the periphery of the centre. There are 864 existing parking spaces and 788 further spaces are proposed in the next phase of redevelopment. Traffic congestion has been relieved with the completion of the eastern and southern sections of the inner ring road, but the busy A671 still at present bisects the shopping area.

ACCRINGTON

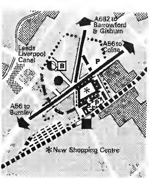
13.12 The town centre covers about 65 acres (Figure 13.3) and contains 349 of the total of 731 shops in the town. Since 1961 a new shopping development has been carried out and a new market and bus station have been completed. At present there is a lack of recreational and educational facilities and of convenient open spaces in the centre. Although they are not in proximity, the railway and bus stations are reasonably well sited in relation to the shops. At present there is considerable traffic congestion resulting from the use of A679 as a trunk route.

NELSON

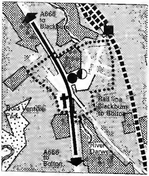
13.13 The town centre covers some 38 acres (Figure 13.4) and contains many of the total 654 shops which were in the town in 1961. A large new centre containing 140,000 square feet of floorspace is at present under construction. The market hall and bus station are both to be relocated in connection with this development. Both railway and bus stations are conveniently located in relation to the shopping centre. There are 390 existing parking spaces and 668 spaces proposed. A56 at present goes through the shopping area.

DARWEN

13.14 The town centre covers some 30 acres (Figure 13.5) and contains most of the 550 shops that



13.4 NELSON MB : TOWN CENTRE



13.5 DARWEN MB : TOWN CENTRE

KEY FOR FIGS. 13.4 & 13.5

Town centre boundary	••••••
Non-Industrial areas	░
Industrial areas	▒
Canals	═
Rivers	～
Town Hall	●
Market Hall	◐
Principal church	✚
Principal shopping frontages	└─┘
Principal Roads	━
Proposed roads	▬ ▬ ▬
Rail lines	■■■■
Railway station	■
Bus station	[B]
Proposed bus station	⁝B⁝
Parking/ground level	P
Proposed parking/upper level	⁝P⁝
Recent development	▭
Proposed development	⁝ ⁝
Pedestrian precinct	⁚⁚
Public open space	⁚⁚⁚

were in the town in 1961. There has been no redevelopment in recent years. The centre contains the cluster of commercial, residential and industrial uses around the market hall characteristic of a Lancashire town of this size and age. Both railway and bus stations are conveniently located to the centre which suffers, however, from interference by traffic on the Blackburn to Bolton road, A666.

Future Prospects

13.15 In looking to the future, we concern ourselves only with that section of retail trade which is likely to be fairly mobile and might be attracted to other centres outside the study area. Only the four or five largest centres in the subregion are likely to be competing for this kind of trade.

13.16 We employed a computer model (described more fully in Appendix F) which calculates the pull of a given centre on a given residential zone in relation to a measure of the centre's attractiveness and to the distance between the two. The residential zone's spending power is then allocated to each shopping centre in relation to its calculated pull.

TABLE 13.8 FUTURE CHANGES IN SHOPPING CATCHMENT 1961-1991*

	1961	1981	1991
Blackburn	6.0	6.9	7.3
Burnley	4.5	3.5	3.5
Accrington	2.3	2.5	2.4
Nelson	2.0	2.0	1.9
Darwen	1.0	1.5	1.3
North East Lancashire	15.8	16.4	16.4
Preston	10.9	16.1	19.9
Chorley	2.0	2.1	2.2
Bolton	11.7	15.6	16.4
Bury	3.4	3.5	3.6
Manchester	53.6	55.6	57.9

* Measured by Central Area Turnover (£ million) in Durable Goods Trade at 1961 level of spending

TABLE 13.9 FUTURE CHANGES IN EXPENDITURE PER HEAD THROUGH RETAIL OUTLETS (£ per annum)

	1961	1991
Convenience Goods	92	133
Durable Goods	72	162
Total	164	295

We were fortunate that Manchester University had conducted some of the basic research* which enabled us to prepare the data for the model fairly quickly. The results described below are based on the following factors :-

a) Expenditure per head at 1961 levels for the whole of the subregion. This makes it easier to evaluate the results in present day terms

b) The central area turnover in durable goods (i.e. excluding food, confectionery) of the five largest centres in North East Lancashire. Turnover outside main centres is assumed to remain at the same proportion of the total as at present.

c) Projected future attraction factors for each centre. These are based on the present position and on predicted population changes.

d) The expected future road network.

13.17 The results shown in Table 13.8 are therefore measures of the likely change in the proportion of durable goods trade handled by the centres studied. In general, the North East Lancashire overall position is virtually unchanged, but a major shift from Burnley to Blackburn is indicated. This is due to the estimated slower growth in population in the Burnley Area, and increase in the hierarchy measure given to Blackburn as a result of its redevelopment schemes, and the improvement in communications between the two areas. It has been assumed that the proportion of trade retained by the smaller towns remains roughly constant. Very significant, however, is the large increase attributed to Preston which gains from its position at the junction of several motorways and from the fact that it is already a major centre.

13.18 In considering the future level of trade in general we must take into account the likely growth in consumers' expenditure. Projections which we developed for the new town designation study suggest the pattern shown in Table 13.9 for future changes in expenditure per head through retail outlets (at constant prices). In general, therefore, it seems that there will be a healthy increase in retail trade in North East Lancashire, but this does not necessarily imply that there will be substantial increase in the number of shops. Indeed, the trend is for there to be a decline as leading retailers become more efficient and competitive. We would, therefore, expect individual centres to be affected as follows.

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* 'Regional Shopping Centres in North West England, Part 2' - Manchester University 1967

BLACKBURN

13.19 The shopping population is likely to increase slightly. Combined with an increase in expenditure per head, this means that turnover (at constant prices) may approximately double by 1991. The existing schemes are therefore likely to prove very successful, and more multiple retailers will probably be attracted to the town. It is unlikely, however, that there will be a demand for large net increases in floorspace. Considerable further rebuilding in the town centre is made necessary by the present condition of buildings there, and also by the need to integrate new development into its surroundings. It is unlikely that the commercial stimulus arising from increasing turnover will be sufficient to provide more than a proportion of this. Other improvement might result from road works and from the rehabilitation of existing buildings and the opportunity might thus arise of providing some much needed facilities such as open space. It will be particularly necessary to maintain the high standards already achieved in redevelopment to ensure that Blackburn remains an attractive centre.

BURNLEY

13.20 There is likely to be a loss of a considerable proportion of Burnley's present catchment and, as a result, turnover will increase at a more modest rate - up to about £7 million at 1961 prices. Thus the existing new developments and proposals providing about 250,000 square feet of new shops by 1974 are likely to be ample. There may not be much demand for further redevelopment and some of the older property on the fringe of the centre may fall out of retail use. Much traffic will be taken out of the centre with the completion of the Inner Ring Road. It is unlikely that commercial enterprise will be able to provide more than a small proportion of the redevelopment called for by age and condition of buildings in the centre. The areas around the centre contain a particularly high proportion of industrial buildings that are becoming obsolescent. A limited opportunity may arise from roadworks and rehabilitation for the provision of much needed open space and the improvement of the centre's setting. It would be possible to make attractive use of the canal and of the two rivers winding through the centre, but it will be essential to maintain a high standard of design in future buildings.

ACCRINGTON

13.21 There may be quite a large increase in Accrington's turnover, but it appears that the town is well supplied with new shops and at least one new scheme has been unsuccessful. Again, therefore, it is likely that some property situated some distance away from the core around the new market could fall out of retail use. A planning study of the centre has been made by Lancashire County Council which proposes a diversion of A679. This will remedy problems of traffic congestion and allow much of the centre to be reserved for pedestrians. If the scheme is implemented Accrington should continue to be an attractive shopping centre.

NELSON

13.22 Further population decline, together with better communications with Blackburn, may mean that Nelson's turnover increases will be fairly moderate, and will largely be met by the new scheme at present being built. Again much peripheral shopping may fall out of retail use. It will be desirable to do further work to integrate the new development with the old, while rehabilitation will present the opportunity to provide open space to connect the centre with the river and canal.

DARWEN

13.23 It appears that Darwen will probably maintain its position reasonably well and turnover will increase substantially between 1961 and 1991. At the moment, however, the centre is stagnating and little interest in it is shown by developers. There will very probably be some change in this position and some modernisation will take place. It is likely that this will be away from the main road and, although total floorspace may remain unchanged or even increase slightly, some property that now straggles along the main road may cease to remain in shopping use.

OTHER CENTRES

13.24 We have so far assumed that the turnover of other centres and shops outside the main centres would form the same proportion of total trade as they did in 1961. With improved communications and greater mobility, however, it is likely that local centres will in fact lose some trade to the larger towns. Turnover may thus increase only moderately in a number of the smaller towns in North East Lancashire. There may be some piecemeal modernisation but no substantial redevelopment schemes. Small shops will probably continue to close down as competition from other centres increases and the swing in custom continues towards supermarkets and the smaller self-service stores.

Offices

13.25 Offices, as well as being important employers, are also large users of land and important sources of rate revenue for local authorities. Blackburn is the most important centre at the moment, with just under 400,000 square feet of floorspace. Burnley is also an important centre, as are Nelson and Accrington to a lesser extent. In other towns office accommodation is mainly in the form of banks, with a few local professional and governmental offices.

13.26 Statistics on trends in the area are very difficult to obtain. There are, however, some indications that North East Lancashire has not shared in the general boom in office development during recent years. It is not to be expected, however, that there should have been any development of the head office type which has largely taken place in London, and to a very limited extent in the main provincial cities. The same applies to decentralised or footloose offices which have been developed mainly in the Outer London area and the rest of the South East. A third category is offices, of small professional firms, insurance companies etc. located primarily to serve the local market.

13.27 Employment in this category has been increasing steadily in the study area. An indication of the growth rate can be obtained by studying those figures that are available. Table 13.10 gives a selection of such categories and shows that the growth rate of the subregion has been considerably slower than the national one. It is clear that population decline in North East Lancashire is a major reason for this stagnation, but there was also a slower increase in the employment/population ratio. A further indication of the pace of recent growth can be obtained from information on floorspace changes which is available for the last three years (Table 13.11). These show that development has been slower in North East Lancashire than in Central Lancashire and the North West Region as a whole. North East Lancashire, for instance, with nearly 7% of the region's population, had less than 5% of the region's net increase in office floorspace. Central Lancashire, however, with only about 4% of the population, had 6% of the growth in offices.

13.28 It can be seen from Table 13.11 that both the Government and the commercial elements contributed to the impetus for the development of Central Lancashire, chiefly in Preston. However, the difference between the rates of growth of Central and North East Lancashire was bigger in the commercial sector than in the governmental. Nearly 70% of the increase in North East Lancashire was concentrated in Blackburn and Accrington. Of the other towns, Burnley and Nelson are the only ones where there have been any appreciable changes. In the others there have been only small developments of less than 5,000 square feet.

Demands for Office Space

13.29 The future of office development in the sub-region depends largely on population growth. Our analysis of employment figures in Section 9 indicated that there will also be an increase in the employment/population ratio for all of the office categories listed in Table 13.10. In the Blackburn Area this

TABLE 13.11 OFFICE FLOORSPACE CHANGES 1964-67 (1,000 sq. ft.)

	Government	Commercial	Total
North East Lancashire	47.1	138.0	185.1
Central Lancashire	61.7	173.8	235.5
North West Region	1087	2795	3882

Source: Ministry of Housing (based on Inland Revenue data)

TABLE 13.10 EMPLOYMENT IN SELECTED OFFICE INDUSTRIES

	North East Lancashire		Change 1952-66	
	1952	1966	North East Lancashire	Great Britain
Insurance, Banking, Finance	2147	2327	8.4%	44.7%
Accountancy	815	649	5.5%	42.0%
Legal Services	657	780	18.7%	33.7%
Other Professional Services*	283	254	-10.2%	37.9%
Local Government	6301	6299		7.0%
Total above	10003	10309	3.1%	24.3%

* Not corrected for change in classification in 1958. Source: Ministry of Labour Returns

will probably lead to a total increase in employment of some 2,500 by 1991. Most of this will be in Blackburn itself, and will lead to a demand for additional floorspace from both public and private users. In the private sector most of the increase is expected in the insurance, banking and finance category, and will probably take place through the development of new offices in subsidiary shopping centres in the suburbs.

13.30 It is likely that there will be a demand, however, for space in the town centre from professional firms and central and local government authorities. This might be of the order of 50,000 square feet and 100,000 square feet respectively in Blackburn town centre, and will probably occur through the modernisation and extension of existing premises, and the conversion of houses and shops on the fringe of the central area. There will be similar developments in Accrington, though on a smaller scale.

13.31 In the Burnley Area growth is likely to be more modest. Nevertheless, the total floorspace increase could be over 100,000 square feet by 1991. It is likely that most of this will be shared between Nelson and Burnley. Some of the growth will, however, take place outside the town centres so that there will only be a moderate demand for further development and conversion on their fringes - perhaps of the order of 30,000 square feet in Burnley and rather less in Nelson.

Other Town Centres Activities

13.32 The other commercial users of town centre land are varied and include entertainment facilities, hotels and other service trades. Employment figures for some of these services have been studied to provide an indication of the level of activity in each. Some of these services are akin to retail shops as they require the same sort of premises and location. Such services include hairdressing, dry-cleaning, betting, travel agencies, photography and so on. There has been a steady growth in these activities, particularly in hairdressing and licensed betting in recent years. Although the growth in these sectors is now expected to level off it is likely that other services will develop to serve an increasingly prosperous community.

13.33 Developments in the hotel and catering industry have consisted of one large hotel in Burnley and some restaurants elsewhere. There may not be much growth in the hotel trade since it is unlikely that there will be much increase in the number of business customers either in North East Lancashire or in the country as a whole. Indeed, with improved communications within the region there may be a decline in the trade of local hotels. However, there will probably be further increases in the eating out habit and this will encourage new development. Some of this will be in the main shopping centres.

13.34 Entertainment facilities in the subregion, as elsewhere in the country, have suffered a decline, mainly as a result of the coming of television. Rapid changes in fashion make it very difficult to predict future trends. There has, for instance, been a recent drop in the popularity of bowling. It seems, however, that any future developments are going to be primarily in the larger towns, spreading to others like Blackburn and Burnley only when a form of entertainment is well-established.

13.35 The motor trade is a business that will contribute much to the future economy of North East Lancashire. It is likely that there will be further demands for land for garages, showrooms and second-hand sales space. Some of this is likely to be of the prestige showroom type located near the shopping centres. This further demand will probably be evident both in the two largest towns and in the next four or five.

Conclusions

13.36 There is likely to be an increase in the level of town centre activities in each of the main towns of North East Lancashire. The rate of growth will, however, be considerably slower than the average rate for the nation as a whole. In most of the towns, perhaps with the exception of Blackburn, there will probably be some decline in the number of shops trading on the periphery of the town centre, although some will be converted into offices. All the other users of central area land, however, will probably be looking for more space rather than less. Blackburn in particular is expected to become a more thriving centre, and will probably establish itself increasingly as the dominant commercial centre in the subregion.

The main street in Colne

Brierfield. The Municipal Offices
and Public Library adjoining the A56.

Section Fourteen

Summary of the future without the new town

14.1 The future prospects of North East Lancashire, in the absence of the new town, will be affected principally by trends in employment and the overall standards of communications, housing and living conditions.

14.2 It is only possible to attempt to forecast what employment in manufacturing industry will be in the future after studying trends in output and productivity at national, regional and local level, and the policies of local firms. We consider that total manufacturing employment is likely to fall from 131,000 in 1966 to about 115,000 in 1981. It will continue to fall slightly thereafter and might drop to 112,000 by 1991 (Table 8.24). The rates of decline in the three Areas are expected to differ, as a result of the different 'mix' of industry in each. Over the period 1966 to 1981 total manufacturing employment is forecast to fall in the Blackburn Area by 7%, in the Burnley Area by 14% and in Rossendale by over 22%. The rate of decline is expected to slacken between 1981 and 1991 in all three Areas. For this period employment might remain stable in the Blackburn Area but fall by about 2.5% in the Burnley Area and by 9% in the Rossendale Area. It must be appreciated that these figures are subject to variation in that no forecast for 20 and more years ahead will be exactly correct, but they are thought to show both the directions of change and the most probable orders of magnitude.

14.3 Considerable growth has taken place in service industry in recent years, employment in services having risen 15% from 1953 to 1966, yet neither this growth nor the level attained compares with that of the nation as a whole. We have treated service industry projections in a different way from manufacturing activities because their growth is far more closely linked to local population size. Our forecasts are based on an analysis of local, regional and national trends in the growth of service industries, bearing in mind the expected changes. Service employment will probably continue to increase rapidly in the country as a whole and by 1991 could make up two-thirds of total employment. Much of this increase, however, will be in service industries not well represented in North East Lancashire. The subregion will also be affected by a slower rate of population increase than that of the country as a whole. As a result the rate of employment growth in service industry will be relatively slow, rising from the 1966 level of 92,000 jobs to 101,000 in 1981 and 109,000 in 1991.

14.4 The growth of retail turnover in North East Lancashire by 1991 is unlikely to change the present hierarchy of shopping centres radically. There is likely to be an increased outflow of trade from North East Lancashire, while local centres within the sub-region will probably also lose trade to the larger towns. There is likely to be a faster rate of growth of shopping facilities in the Blackburn Area than in either the Burnley or Rossendale Areas. It is probable that present development proposals will be sufficient to satisfy future demands for floorspace in all centres except Blackburn, where provision of additional retail and office floorspace might be required.

14.5 Employment prospects have considerable implications for future population levels. At present, after many years of decline caused by migration and the excess of deaths over births, the population picture shows slight but significant improvement. Although net emigration continues births now exceed deaths in the study area. Population growth is most pronounced in the Blackburn Area where despite recent declines in population inside the older towns of Blackburn and Accrington, rapid increases have taken place in the surrounding areas. The population decline in the Burnley Area is most pronounced in the towns to the north-east of Burnley.

14.6 Future population levels are difficult to predict in view of the uncertainties which surround the future migration from North East Lancashire. Faced with this problem we have combined the information provided by the migration survey, population forecasts and predicted job opportunities to arrive at a reasonable range for the future population of the study area. The projections are summarised in Table 11.3. We consider that the population of the Blackburn Area might increase appreciably while that of the Burnley

Area might increase only slightly. The Rossendale Area is faced with the prospect of further population decline. The population of North East Lancashire as a whole might rise from the present 470,000 to about 500,000 by 1991 as our 'best' estimate. However, we have shown that there are elements of uncertainty in this forecast and that deviation from it is more likely to result in a figure in the range of 460,000/500,000 than above the latter.

14.7 Current road proposals extend to 1981. By then an estimated £23.5 million will have been spent both upon road improvements and upon new roads which will comprise 19 miles of dual carriageway and 18 miles of two-lane roads for later conversion to dual carriageway. The improvements will be principally to the A59 and A56 trunk routes. The Burnley Area and the Rossendale towns will have excellent road links via A56 to Manchester and the national motorway network including the Trans Pennine motorway; the Blackburn Area will have greatly improved access to the national motorway network via the completed dual two-lane link from the outer ring road to M6 and via the Wheelton By-pass to M61. However there are at present no proposals for a fast direct route linking these outward pointing communication routes and serving the major urban concentration stretching from Blackburn to Colne. We doubt whether the proposed improvements which also include internal by-passes to the central areas of Burnley and Accrington will better the existing standard of time/distance accessibility within the study area in view of the probable doubling of the present total of 65,000 private cars by 1981, the changing patterns of vehicle usage and the extent of urban areas through which the traffic passes. This will not be helped by the apparent lack of proposals to improve rail services.

14.8 There are no major problems relating to public utilities in the future. At present gas and electricity supplies can satisfy demands. Water supply is adequate but considerable expenditure will be required if some sewerage systems are to cope with future needs.

14.9 The contraction of the cotton industry and the consequent decrease in population bave left severe social and physical problems in North East Lancashire. About $\frac{2}{3}$ the present total of over 172,000 dwellings were built before 1911 and many houses are in poor structural condition and have poor internal standards. The annual rate of slum clearance has increased by five times since 1955 to reach 1,100 houses in 1966 while almost twice that number of new houses were completed in the same year. Present local authority programmes indicate a major increase in demolition and house building rates for the years up to 1976.

14.10 There is thus a great deal of evidence of major effort being made by local authorities to improve living conditions, but the task is formidable. We estimate that by 1991 almost half of the present dwelling stock will need either to be demolished or rehabilitated, and dwellings which need demolition amount to almost one-third of the present total. Our projections of future demolition and house-building rates indicate that it is unlikely that these targets could be achieved in full in the Blackburn and Burnley Areas, though they might be achieved in the Rossendale Area. A dynamic rehabilitation policy would do much to improve conditions in inner urban areas and also to reduce housing costs. As an essential element in future local authority programmes it could well be a key factor in achieving overall improvement in the urban environment.

14.11 Commercial developments have taken place and are taking place upon modern lines in the centres of Blackburn, Burnley, Nelson, Accrington and Rawtenstall, providing a considerable range of new buildings including shops, covered markets, offices, bus stations and car parks. Our findings, (Para. 14.4) that no further major commercial developments are likely means that it will be more difficult to improve the central parts of the towns. The provision of public open space and amenity factors such as covered pedestrian ways and pedestrian precincts will not come therefore as part of further commercial redevelopment. Likewise, major renewal on sites adjoining central areas cannot be expected to result from private sector investment and over the period until 1991 it will be limited to satisfying other service needs and in Blackburn's case in particular to car parking requirements. Other pressures will, however, result from the need to improve roads, and to renew housing which is a major land use in many centres. The quality of future central area environment in Burnley, Accrington and Blackburn in particular will not depend exclusively upon the new facilities which have been and are likely to be provided. Their attractiveness will be judged by the degree to which both working and living population are catered for in terms of amenities such as space for car parking and improved public transport services.

14.12 The study area lacks many of those facilities which would be found in an area with the same population but of a more concentrated urban form. It is however well provided with facilities suited to the active social life of its population and characteristic of the period of its prosperity, such as pubs, clubs and assembly halls. As the population in the future will cover wider areas at lower densities many such facilities particularly in inner urban areas will be affected by poor location and the obsolescence of building fabric. Therefore a major effort will be required to maintain the present level of provision - quite apart from improving on its quality. It is probable, however, that in the future the Blackburn Area will remain well provided with welfare facilities and the Burnley Area with entertainment facilities. The future of the Rossendale Area is less certain because much will depend on its growing linkages with towns to the south, outside our study area, and we have therefore not been able to make any assessment of their effects. If the present lack of city scale facilities in the study area were overcome a major social and environmental impetus towards the regeneration of North East Lancashire might result.

14.13 There appears to be sufficient building land in the subregion as a whole, to satisfy future housing needs. A shortage of housing land might, however, develop in the Rossendale Area if large demand were to result from a closer relationship with the large urban concentrations to the south. The best potential sites for industrial development are sited between Blackburn and Burnley.

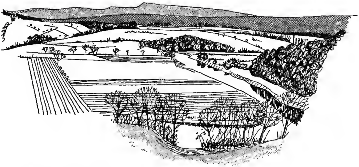
14.14 There is no doubt that the continuing reduction of air pollution will lead to climatic improvements which will go a long way towards making the subregion more attractive.

14.15 The renewal of the 'twilight' areas between the rebuilt town centres and residential expansion on the outskirts is the main problem facing the towns of North East Lancashire. These areas can be rebuilt either by the redevelopment of individual areas as decay makes this essential and as resources allow or by a comprehensive rolling plan related to the future of the central areas and the whole structure of the towns. We appreciate that the latter course is as much a problem of finance and administration as of planning and design. If, however, the building rates envisaged in the future can be related to a comprehensive programme, rather than to the present piecemeal approach towards rehabilitation and renewal, and if a high standard of design is achieved then the period up to 1981 could see a major transformation of the present urban scene. We are concerned however, that under the present structure of local government the limited resources available make comprehensive development extremely difficult particularly for the smaller towns.

PART 4

Central Lancashire

Section 15 The proposed new town 1967–1991 Page 167



Ribble Valley looking north towards Longridge, between Preston and Blackburn

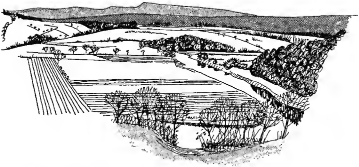
The proposed new town 1967–1991

15.1 The history of this project from 1951 to the present has already been briefly described in the Foreword to this Report. The consultants' feasibility study and recommendations for the area to be designated under the New Towns Act were published in May 1967 under the title "Central Lancashire - Study for a City" (Her Majesty's Stationery Office). This report suggested a designated area of 51,400 acres between Chorley and Longridge to accommodate the present population of 253,000 together with 150,000 immigrants and the natural increase of both - a total population of 503,000 assuming a high rate of natural increase. A twenty year period was proposed for this development from 1971 to 1991.

The Designation Report

15.2 The designation report considered the regional context of the project - its geography, communications, physical structure and population - and went on to deal with the economic situation in the study area as a basis for industrial growth. The report examined the conditions necessary for the new town to succeed and concluded that they were present. It emerged that there was more than enough suitable land within Central Lancashire to accommodate the proposed increase in population. The area was judged to have a sound economic base with considerable potential for the expansion of existing industries, and to be well placed to attract new industry, so as to ensure that the build-up of jobs would match the planned population growth. Assuming that a comprehensive sub-regional building programme would be organised on the basis of advanced building and management techniques, the report concluded that there was no reason why the new town should not be built at the envisaged growth rate.

15.3 The section of the designation report dealing with proposals for the new development set out strategic concepts for the form of the new city and established the environmental standards which would determine its space needs. The suggested community structure is derived from a hierarchy of neighbourhoods (4-5,000 people), districts (15-18,000) and townships (60-80,000) which were considered to represent viable social and economic units of development.



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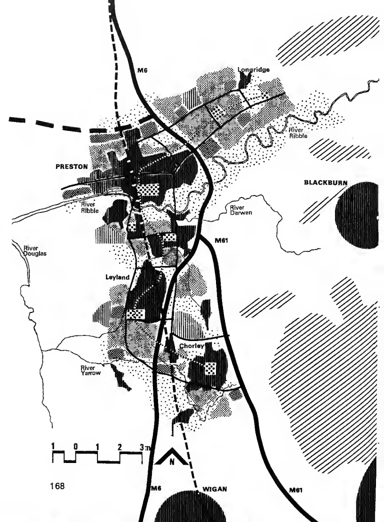

M6
Longridge
River Ribble
PRESTON
BLACKBURN
River Ribble
River Darwen
M61
River Douglas
Leyland
Chorley
River Yarrow
1 0 1 2 3 m
N
M6
WIGAN
M61

It was decided to base the whole development on a linear communications structure linking the expanded existing townships with each other and with new townships. The ultimate size of half a million people is seen as a great advantage because of the major facilities which can be provided in a city of that size, and which at present are available only in the congested and inaccessible centres of the two conurbations of the North West Region. The proposed urban form would bring about a measure of dispersal of such city scale facilities within an integrated structure of land use and transportation channels planned to give a high level of accessibility for both public and private transport, and to bring character and goodness to every part of the development.

15.4 The rejuvenation of existing communities was regarded as an essential pre-requisite of successful new growth. The designation proposals therefore sprang directly from a study of how existing and new could be integrated to the advantage of both. It appears, in broad terms, that half the new population should be accommodated in expansion of the existing settlements south of the Ribble, and the remainder in new townships to the north. Preston would maintain its role as the subregional centre near the middle of the line of communications which forms the spine of this chain of new and expanded communities. Alternative township structures were examined and their transportation systems tested. From the evaluation of these structures against a set of strategic criteria the best option for development was selected (Figure 15.1).

15.1 THE PROPOSED DESIGNATION STRUCTURE

Existing urban area	■
General residential area	▒
Industrial area	▓
Town centre	⁘
Special ownerships	‖‖‖
Open space and landscape features	⁖
Land over 600 feet	////
High speed road	━
Railway	■ ■ ■
Public transport route	•■■•■

A Possible Pattern of Growth

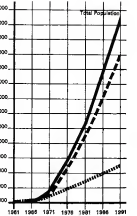
15.5 This section is not intended to give a preview of the master plan for the new town but to outline, from the best information available at this stage a possible pattern of growth. The phasing of development is of course an essential part of the plan, and a great deal of attention will have to be given during work on the master plan to the many aspects of this problem. While we do not envisage fundamental changes to the growth pattern suggested below, work still to be done, including checking of the growth pattern by probe studies, might well lead to revision. It remains, however, the best hypothesis we can make at the present time for the purpose of the impact study.

15.6 The proposed pattern of growth is based on the satisfaction of a series of related criteria of growth and regeneration covering such aspects as the integration of new growth with existing communities, the planned distribution of major city functions, the needs of industry, the ratio of public to private building and investment, and the achievement of socially and economically balanced stages of growth at reasonable cost. These and other aspects of growth and form which will establish the basis for the preparation of the plan for the new town will be described in detail in the master plan report. For the purposes of the impact report we shall deal first with present trends and then the plan period from 1971 - 1991 divided into broad bands marking significant changes in the hypothetical pace and location of development. Figure 15.2 shows the proposed population growth of the new town and Figure 15.3 the jobs required to match this population growth.

Present Trends and the Situation to 1971

15.7 From 1961 to 1967 the population within the proposed designated area grew by 1% per annum, reaching 255,400 in 1967, and the internal movement away from the inner areas to the suburbs of Preston and Chorley continued. Total employment remained static. A decrease in manufacturing employment was offset by a 4% increase in service employment. Although these trends reflect rising affluence the prosperity of the area is still slightly below the national average. Car ownership in Preston, for instance, is approximately five-sixths of the national average. The number of houses built each year is about 2,400 of which a quarter are for local authorities.

15.8 During the period 1968 - 71 the new town is not likely to contribute greatly to the growth of population or employment and existing growth rates may be little changed. This period, assuming the publication of the Designation Order, would see the setting up of the Development Corporation and the drawing up of the master plan. Thus, development control would be able to prepare the way more precisely for major works of infrastructure, growth and regeneration. It would be necessary to set up an administrative framework linking the Development Corporation, local authorities and statutory undertakers to co-ordinate development. The first building work would provide housing and industrial space for those who may subsequently be displaced by the replanning of urban areas in Preston and Walton-le-Dale and this would lead to an increase in the number of jobs in the construction industry. Pilot projects may be set up to test planning and constructional concepts in practice. Population in 1971 is estimated to be about 260,000 (Figure 15.2).



15.2 POPULATION GROWTH OF THE AREA PROPOSED FOR DESIGNATION.

The natural increase of the base population is shown by the lower dotted line. The upper dotted line shows the result of adding the immigrant population. The solid line shows the result of adding the natural increase of immigrants to give the cumulative total (high forecast).

1972 - 1976

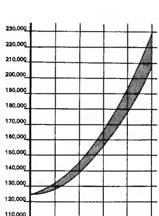
15.9 This period would see the first significant changes and by 1976 about 30,500 incoming population would have been accommodated. A progressive increase in the annual population growth rate is expected to give a total estimated population of 300,000 in 1976 (Figure 15.2). The first major stages of growth would take place in Leyland. Major works on infrastructure would begin. There would also be major roadworks, including the bridging of the Ribble and the improvement or construction of roads in urban areas, particularly in the centre of Preston. In order to carry out this extent of development the construction industry would continue to grow and might provide over 2,000 new jobs.

1977 - 1981

15.10 This stage would see the end of rapid growth south of the Ribble and the start of expansion to the north-east. Most redevelopment as a result of the re-planning of Preston would by now be nearing completion and most housing built before 1881 would have been redeveloped. Major roadworks in Preston and south of the Ribbles, except a major junction at Walton le Dale would also be nearing completion while work on infrastructure would continue. The construction industry would continue to achieve a high output and the workforce required, particularly for maintenance, would continue to increase. Industrial growth would continue in all the townships and new employment would be provided at Grimsargh in particular. The estimated population in 1981 is about 350,000, representing an increase over the five year period of 50,000 (Figure 15.2).

1982 - 1991

15.11 It is not possible to forecast development during this period in detail. The total population would, however, by this time start to be sufficient to sustain major city functions. In the first half of this decade the annual size of migrant intake and volume of construction would increase substantially compared with previous stages and the building labour force would again increase. Further growth would take place mainly north of the Ribble at Grimsargh and Longridge. South of the Ribble blighted areas would have been renewed and the intake of migrants would have ceased. It would be necessary for much inter-war and post-war housing to be upgraded to reach current standards, and much of the increased building workforce would be required for maintenance. All major works on infrastructure would be completed. Major roadworks would proceed in the north-east to serve the new population and industry and the major industrial growth would take place in this area. South of the Ribble a more complex economic structure may well develop with increased employment in services.



15.3 THE JOBS REQUIRED TO MATCH POPULATION GROWTH.

The grey band shows the difference between upper and lower estimates.

15.12 The latter part of this decade would mark the completion of the plan period and the start of active consideration of the future. New growth would continue at Ingol and Longridge as would rehabilitation or redevelopment of ageing areas. Possible alternative policies towards provision for further growth may become clarified - it may be accommodated first, within the city by an intensification of land use or, secondly, outside the city by extension beyond Longridge or, thirdly, in further new town development well away from the city. During the whole of this second decade from 1982 to 1991 the population growth is likely to decline to 2½% per annum. By 1991 the intake of 150,000 migrants would have been completed and the total population is likely to be between about 460,000 and 500,000, depending on the future rate of natural population growth.

Beyond 1991

15.13 It is possible that after 1991 considerable immigration may continue although the official intake may have ceased and the pattern of growth may tend to approach that of an established city. Imbalances in other aspects may continue. There may still be a high proportion of young people seeking employment and the construction industry may continue to decline while the tasks of local government may change their emphasis. A policy decision on further expansion will have been taken. The programme of housing renewal may continue so that by 2011 the major part of both structure and fabric of the original areas would have been replaced since the establishment of the new city. If the present tendency towards the hastening obsolescence of housing stock continues it is also possible that the earliest parts of the new growth will be needing rehabilitation or even renewal towards the end of the century.

The Growth of Industry

15.14 There are at present some 125,000 jobs in the area proposed for the new town. These are expected to grow by well over 100,000 during the plan period from 1971 to 1991 (Figure 15.3) and may be more if journeys to work into Central Lancashire from areas outside markedly increase. One of the aims in the planning of industrial growth would be to bring in units of manufacturing industry that are of sufficient scale and nature to initiate further growth, both in the new town and in nearby areas. While the actual pattern is still under examination it can already be said that this is likely to involve the development of some industrial estates of major size, well placed for journey to work, both from inside the new town area and from outside. Detailed examination has already been made of many forms of potential linkage, from sub-contracting to component manufacture and product diversification, by which incoming firms could combine with firms in the surrounding areas, such as North East Lancashire. Such linkages provide favourable conditions for the attraction of industrial units and also serve as a base for the expansion of plants in the surrounding areas by increasing local demands on their capacity. At the same time it is expected that the future mix of industry in the new town would include a higher proportion of units than at present using advanced technologies and drawing on a wider range of higher skills. This would create a wider range of jobs, some of which are likely to be filled by longer journeys to work than are common in the area at present. In these ways it is expected that one of the effects of the new town industrial development would be the meeting of requirements in the original terms of reference to the consultants, "to create an area of growth which will be of benefit to the surrounding areas".

PART 5

Impact: the effect of the new town on North East Lancashire

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The open market and market hall (right) in Darwen.

Section Sixteen

Migration

The Numbers Involved

16.1 It is possible to distinguish two kinds of effect which the proposed new town development in Central Lancashire will have upon the scale of emigration from North East Lancashire :-

a) A quantitative attraction which is a function of the size of the new town, its rate of growth and its distance from North East Lancashire. The population of a town is generally indicative of such features as the size of the labour market and the choice it offers, the range and quality of facilities and the range of housing available for purchase and for rent. These features condition the volume of immigration. Under normal circumstances the quantitative attraction of a given town will not change markedly over a relatively short period of time, being limited to jobs or houses left by emigrants plus a normally small net change in both. In the case of the new town, however, the quantitative attraction is likely to exceed that of an established town of comparable size in view of the faster rate at which jobs, facilities, and housing stock will be created.

b) A qualitative attraction which is determined by the nature and quality of specific attraction factors such as those of housing, employment opportunities, recreational and social amenities, climate and location, and the general image which the town presents when compared with the general level of such factors in the areas from which migrants originate. Obviously both the factors which enter into the qualitative effect and the attractive force they exert will vary as far as the residents of different areas are concerned.

16.2 The total attraction of the new town for all potential origin areas will be limited by its quantitative attraction - the number of additional jobs and houses made available by its growth. For any specific areas the number of migrants moving to a given town is a function of the attraction which its peculiar characteristics possess for the residents of that area. As an illustration of this we may cite some examples from our surveys of migrants from North East Lancashire. Taking a base value of 1.0 for the average number of migrants attracted to all destinations, corrected for varying population size and distance from the study area, the South East Lancashire and Merseyside conurbations had qualitative attraction values of 0.5 while at the other end of the scale the Blackpool, Fylde and Lancaster subregions had values of 7.0 - far above that of any other destination.

16.3 The quantitative effect of the new town upon migratory flows from our study area is considerably easier to estimate than the qualitative effect given certain assumptions concerning the future willingness of people to move over distance to towns of known size. We have therefore adopted a range of possible attraction values for the new town and attempted to estimate the rates of outflow associated with each. One such range is indicated by the towns which were the destinations of migrants in our survey. It would be unrealistic, however, to suppose that the new town will be as unattractive to the resident of the study area as the large cities mentioned in Paragraph 16.2, and equally unlikely that it will approach the levels of Blackpool or Morecambe whose attraction is largely due to qualities which the new town will not possess.

16.4 The scale of migration from North East Lancashire to the new town will, of course, vary with the stringency with which the administrative arrangements limiting the availability of housing and employment opportunities in the new development to migrants from selected or preferred origins are applied. The present machinery is described briefly in Appendix K. The effectiveness of restrictions will depend, in turn, on the strength of the voluntary migration pressures in the exporting areas and compared with other surrounding areas. In order to assess the effect that industrial selection schemes might have upon the pattern of migration to the new town, we carried out a gravitational projection of the sources of potential migration assuming, for the purposes of the exercise, a net inflow figure of 150,000 migrants by 1991 from the North West Region alone. Notional migration figures were derived for the areas of North East Lancashire, Lancaster-Fylde, South Cheshire and South Lancashire. The figures shown in Table 16.1 took account of the present population of these areas, their current (1961) levels of emigration, and their distance from the new development using the proportional adjusted flows described in an earlier section. Columns 1 and 2 show the anticipated pattern of inflow if migration to the new town were completely voluntary, with no special arrangements for the transfer of people from exporting areas. Columns 3 and 4 show the pattern suggested by the experience of the new towns around London, if preferential selection including an Industrial Selection Scheme is introduced.

16.5 It is probable that the actual proportion of all migrants coming to the new town from the exporting areas will be somewhere between the two extremes indicated in Table 16.1. The existence of an industrial selection scheme will undoubtedly raise the proportion above the 41% suggested for movement on a wholly voluntary basis, but the gap between the two sets of figures is indicative of the volume of additional migration above the voluntary level which must be induced in the preferred areas if a level of 65% is to be attained. This is a consequence of the fact that the population of the exporting areas is lower in relation to the number of migrants required than was the case with the London new towns and the distribution of population around the proposed new town area suggests higher competitive pressures from other areas.

16.6 In order to test the validity of the gravity method we made an analysis of the origins of migrants to the London new towns. The same kind of gravity relationship seems to exist, with distance having an even more pronounced effect on the scale of the flows involved. We concluded that movement to new towns is influenced as strongly as moves to established towns by the attraction value of the destination and its distance from the exporting area. It would, however, be sensible to view forecasts, even those for gross flows, with some caution since gravity methods are more applicable to situations which involve only marginal change. Quite obviously the new town in Central Lancashire, when fully developed, will amount to a structural change although its growth may, with some justice, be viewed as a series of marginal changes over two decades.

16.7 Basically our method of estimating the possible effect of the new town on study area emigration is to forecast the anticipated gross outflow of people to the new town and to consider how many will be replaced by migrants from other areas. The final net impact of the new town development upon the migration balance of the study area will be the result of a complex series of effects on migration into, from and within the study area induced by the catalyst effect of the new town upon the existing pattern of movement. We therefore used the gross addition to migration as a starting point and worked through the mechanism of side-effects, rather than attempting to predict the future net balance of migration between the two areas directly.

16.8 We calculated levels of gross migration to the new town from the study area for each individual local authority, based on presumed future total levels of emigration, the distance from Central Lancashire, and assumed future quantitative attraction of the new town. An important element in this quantitative attraction is the level of replacement migration which will be induced by the movement of people out of the new town. However, the principal variable factor in our forecasts of migration to the new town is the qualitative attraction which it will exert upon the residents of North East Lancashire. The following range of possible qualitative attractions were used :-

a) Low estimate. This assumes an attraction

TABLE 16.1 MIGRATION TO THE NEW TOWN "GRAVITY" PROJECTION

	1	2	3	4
Intake from Exporting Areas	62,100	41.4%	97,500	65.0%
Other areas:				
North East Lancashire	24,740	16.5	14,770	9.8
Lancaster-Fylde	14.140	9.4	8,450	5.6
South Cheshire	5,540	3.7	3,310	2.2
South Lancashire	43,480	29.0	25.970	17.4
Subtotal	87,900	58.6	52,500	35.0
Total	150,000	100.0	150,000	100.0

Assumptions: Migration to Central Lancashire New Town will come entirely from within the North West Region (excluding Furness). Numbers of migrants related to each origin's distance from Central Lancashire New Town and total number of out-migrants (1961).

Columns 1 & 2: No special arrangements (pure 'gravity' case).

Columns 3 & 4: Only 35% of migrants will come from outside overspill exporting areas.

value only slightly greater than that which prevails currently for Central Lancashire. This could result if the new town proves considerably less attractive than expected to North East Lancashire residents, or if the industrial selection schemes are rigidly administered.

b) Medium estimate. This assumes a qualitative attraction value which is much higher than that currently prevailing for any population concentration of comparable size, but is certainly quite reasonable in view of the probable relative quality of the various specific attraction factors of the new town compared with North East Lancashire.

c) High estimate. This assumes a high attraction value which might be expected if the particular attractions of the new town exercise a considerably more powerful influence on the residents of the study area than on those of the surrounding areas. If the Central Lancashire New Town development proved even more attractive than allowed for in this high estimate, the number of migrants moving from the study area would probably not effectively increase since there would be much higher competitive pressure from both overspill exporting and other areas.

16.9 On this basis we estimated gross out-migration from the whole study area to the new town for the period to 1991 varies as follows :-

a) Low relative attraction : 25,000
b) Medium " " : 37,600
c) High " " : 45,900

To put these results in perspective, if migration to Central Lancashire continued at the present rate approximately 13,000 people would have left North East Lancashire for this destination in the same period.

16.10 It is clear that the initial effect on gross out-movement will be very different for each of the three Areas of the subregion. On the basis of distance alone we would anticipate that the Blackburn Area would contribute most to movement, but no simple statement can be made on how each Area will be affected without a consideration of certain other factors which will condition the net loss for each area and for North East Lancashire as a whole. These factors are :-

a) The future economic health of each of the Areas. If, for example, an area is expected to have a reasonable buoyancy, with a favourable balance of job opportunities, the net migration loss will probably be less than would be expected if the reverse were true.

b) The probability of a change in the pattern and volume of movement within the subregion effecting a more even spread of impact effects between its Areas. A substantial proportion of migrants to the new town will consist of people who would otherwise have moved to other local authority areas within the subregion. Fewer people might, for example, move from the Blackburn Area to other parts of North East Lancashire, while the reverse flow may well increase as additional housing and employment opportunities are left vacant by migrants to the new town.

c) The extent to which movement to the new town represents a diversion of movement from the study area to other destinations. In addition to those who might in any event be expected to move to Central Lancashire from North East Lancashire, there will probably be some diversion of migrants who would otherwise move to other destinations. The next section, dealing with the motivation of migrants of various kinds from the study area, provides some indication of the present level of migration, and discusses future diversion effects. The Central Lancashire New Town development will probably prove attractive to certain of the groups we think will be moving away from the study area in future. It is impossible, however, to estimate just how strong this diversion effect will be. Faced with this difficulty, we have chosen to work through the calculations on the basis that no diversion takes place and that all movement to the new town from the study area represents an additional net loss. In doing this we are able at least to quantify a range of maximum possible movement for each Area.

d) The effect on migration into the study area, which will be complex. There will, on one hand, tend to be a reduction in the number of immigrants from the remainder of the North West Region to North East Lancashire since the new town will act as a counter-attraction. This will affect the three Areas in varying ways. The Blackburn Area in particular at present attracts a higher proportion of such people than the other divisions of the study area. On the other hand, there may be a corresponding increase in the numbers moving into the Area from the West Riding of Yorkshire and more distant parts of the country. The dominant motivation of such people at present moving to North East Lancashire appears to be a desire for more congenial employment opportunities, direction by their employers, or the wish to take advantage of housing opportunities. As people leave the study area it is possible that a vacuum effect will operate and that this will induce further in-movement. The scale of this movement, however, will depend on employment prospects within the study area and if, as seems quite possible, a relative shortage of jobs develops in all areas in the 1980's the rate of immigration may decrease accordingly.

16.11 Clearly it is impossible to foresee the combined effect of all these factors with any certainty. The best that can be done is to make a general assessment of their implications for the net migration balance of the study area with the new town, bearing Paragraph 16.10 in mind. This is shown in Column 5 of Table 16.2 for the range of estimates of gross emigration given previously. The estimated additional net movement which may be induced by the new town development, represents the net emigration over and above the level of emigration to Central Lancashire which could occur in this period without the new town (Column 2), allowing also for the presumed immigration (Column 4) to North East Lancashire, which will be induced by the gross emigration.

16.12 Obviously, the three Areas of the subregion will contribute differently to this total movement. We estimate that the Blackburn Area will account for about 60-70% of the movement in each case, the Burnley Area about 20-25%, with the Rossendale Area providing the remaining 10-15%. This represents the most likely distribution, taking account of the various flows involved, but we have made allowance for possible variations in arriving at our forecasts of

TABLE 16.2 MIGRATION TO THE NEW TOWN 1971-91 : NET IMPACT (ASSUMING NO DIVERSION)

	1	2	3	4	5
	Total migration to Central Lancashire		Exceptional emigration (1-2)	Additional immigration	Additional net migration loss (3-4)
	with new town	without new town			
High	45,900	13,000	32,900	15,900	17,000
Medium	37,600	13,000	24,600	11,600	13,000
Low	25,000	13,000	12,000	4,000	8,000

the effects of the new town development. The effect of the new town on emigration is likely to be somewhat greater in the latter half of the period of its development (i.e., from 1981-1991) than in the early years. Both its quantitative and qualitative attraction for North East Lancashire residents will probably increase markedly after 1981 when a relative shortage of employment opportunities may also possibly develop in the study area.

The People Involved

16.13 The development of the new town may be expected to affect emigration from North East Lancashire in three ways :-

a) By changing the pattern of migration destinations, attracting a higher proportion of emigrants than would otherwise be the case.

b) By increasing the numbers of people leaving the subregion, attracting people who otherwise might not have moved from North East Lancashire.

c) By increasing the range and variety of jobs available to people in North East Lancashire, thereby inducing people who might otherwise have left, to remain in the subregion.

16.14 It is particularly important to know what kinds of people are likely to be involved in these effects. The best evidence available on these points is provided by the results of our survey of migrants from North East Lancashire. Analysis of the types of people involved in emigration and of their motivations provide some indication of the extent to which emigration may be diverted, stimulated or inhibited by the presence of the new town.

16.15 Clearly the new town will not cause a radical change either in the destination or in the numbers of certain types of migrants. The evidence of our survey suggests that a considerable proportion of present movement away from North East Lancashire is of a kind which will not, in general, be very responsive to the particular attractions of the new development.

16.16 Unresponsive or inelastic migration is made up of several elements :-

a) Migration for family reasons such as to get married, to live with or near friends and relatives or to retire. The major motive here, to live with or near friends and relatives, largely represents the effects of migration during previous years. The other major reason, retirement, seems generally to be associated with the desire for a better climate.

b) Migration for reasons mainly associated with personal circumstances, where family ties once again play a predominant role.

c) Migration as a search for improved climate. Again although the climate of Central Lancashire is somewhat better than that of North East Lancashire, people moving primarily for this reason will have better alternatives open to them. Moves for this reason are not only associated with the elderly, and the moves to areas on the Fylde coast are by no means confined to retirement migrants (see Appendix B).

d) Migration as a result of direction by an employer. Such movements fall less into the category of voluntary moves than into that of enforced moves.

16.17 Allowing some latitude for the latter point, about 40% of the migrant households covered in our survey left North East Lancashire for reasons which are unlikely to change abruptly with the development of the new town. It is, therefore, to the other migrants in our survey and in particular to the economically active emigrants, that we must look in order to judge what effects the new town may have on the inclination of various kinds of people to leave the study area.

16.18 It is clear, first of all, that migrants differ very markedly in certain respects from the base population from which they are drawn. That migrants tend to be, in general, younger, more active and better qualified is sufficiently well known to require no further comment here, except to say that our survey results reflect this. It is, for our purposes, particularly interesting to compare the various status or class groups of migrants with the population of the areas from which they move. Table 16.3 illustrates this comparison. The Table shows clearly that for all three Areas the propensity to migrate declines sharply with social class, with a clear break between Classes I and II, the professional and intermediate workers, and other groups. White collar

TABLE 16.3 SOCIAL CLASS : MALE ACTIVE POPULATION

Social Class		England & Wales	Blackburn Area		Burnley Area		Rossendale Area	
		1961 Census %	1966 Census %	1965-67 Emigrants %	1966 Census %	1965-67 Emigrants %	1966 Census %	1965-67 Emigrants %
I	Professional occupations etc	3.8	3.5	16.0	3.0	13.7	4.1	9.4
II	Intermediate occupations Managers, Executive, Minor professional (e.g. nurses, teachers)	15.2	14.0	39.0	17.0	34.5	12.3	23.2
III	Skilled occupations (manual & non-manual)	51.0	53.5	38.0	50.7	41.7	54.7	53.3
IV	Partly skilled occupations	20.8	18.6	7.0	19.7	10.0	17.7	14.1
V	Unskilled occupations	9.2	10.4		9.6		11.3	

workers as a group were very much more likely to move away from North East Lancashire than were manual workers or the economically inactive. We now examine each of these active migrant groups and assess the probable implications of the new town development on the scale and direction of migration of each.

16.19 Group I, the group with much the greater propensity to emigrate, and accounting for 12% of the active emigrant heads of households, forms the peak of what is generally called the migratory elite or the 'spiralists'. 'The progressive ascent of specialists of different kinds through a series of positions in one or more hierarchical structures and the concomitant residential mobility through a number of communities at one or more steps in this ascent forms a characteristic combination of social or spatial mobility ... called spiralism.* The main point here is that this upwards and outward movement is circulatory, the departure of 'spiralists' being balanced by the arrival of others comparable in numbers and competence. Our sample of people moving into North East Lancashire, small though it is, tends to confirm this basic pattern although there may, in fact, be some net loss. The movement of such people is made possible by their possession of widely accepted qualifications and by the fact that their network of opportunity is on a national scale. In our sample, Class I migrants were well equipped with generally acceptable qualifications. Over two-thirds had degrees or diplomas of a professional body. They moved noticeably further afield than other migrants and were much less likely to be tied either to a firm or by their family circumstances. Their primary motive appeared to be the furtherance of their careers.

16.20 Class II consisting of managers, executives and other professional workers shares the general movement characteristics of Class I to a considerable degree. This class made up a further 32% of our active migrant heads of households. People in this group were slightly older than the average active emigrant but were still very much concerned with their job and career prospects in making their move. They were, again, quite highly qualified. Almost a quarter possessed a degree or other professional qualification and a further 30% possessed some other form of professional, technical or higher educational form of qualification. They were, in comparison with Class I migrants, rather less likely to move long distances and were also rather less likely to change employers when they did move. Indeed some 45% were either transferred or promoted by their employers as compared with about 28% for Class I migrants.

16.21 Two-thirds of Class I emigrants came from three sectors of activity in North East Lancashire: professional services, public administration and engineering. These same sectors were also the source of 40% of Class II emigrants. Other sectors with a high concentration of professional emigrants were distribution and insurance, banking and finance. All these sectors have in common the characteristic of a wide network of opportunity for professional workers. Such opportunities certainly exist in the health, educational and other government services, and in other sectors movement takes place between branches over a very wide area (banks, multiple stores). An interesting point is the fact that the engineering industry, which has a relatively high proportion of its activity in branch plants in North East Lancashire, accounted for a quarter of Class I migrants.

16.22 In an attempt to judge whether emigration in certain sectors from North East Lancashire was particularly high, an analysis was performed comparing :-

a) The ratio of the percentages of all moves accounted for by a given industry for Lancashire in 1961 and North East Lancashire during 1965-66, and

b) The location quotient for each industry for North East Lancashire in 1965, showing the relative bias of employment by sector in North East Lancashire when compared with the whole of Lancashire. It is interesting to note that, for professional services, emigration did not differ significantly from expectation, suggesting that the movement of professional workers in this sector (80% of all professional emigrants in the survey) was not exceptional.

We concluded that the frequency of emigration and the spatial dispersion of destination for these two groups, making up almost half of active emigrants, are less subject to local influence than that of other groups. The movement of 'spiralists' appears to be more sensitive to changes in the national pattern of opportunity.

16.23 We divide Class III into non-manual and manual workers since their propensities to migrate are significantly different both in scale and motivation. The former group is considerably less mobile than other white collar workers and its members also tend to move shorter distances, possibly due to their lack of universally acceptable qualifications (more than half had no formal qualifications). They tended to be more influenced by family considerations and by the desire for better surroundings than other groups, and to be much less likely than other white collar workers to move voluntarily in search of a better job. 63% of those moving for work reasons were transferred or promoted by their employers. The class of skilled manual workers accounted for about one-fifth of the male household heads in our survey, but proportionately they were less mobile than skilled non-manual workers. A substantially lower proportion moved for work reasons, although as for all groups this was still the most important single reason. But those who did move were far more mobile between employers, the dominant motive being dissatisfaction with their pay, prospects or security of employment in North East Lancashire. The desire to move to obtain better housing or environmental standards was also stronger for these migrants than for any other group. We therefore have a profile of a group willing to move either to improve their earnings or prospects, or to obtain better living conditions.

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* Watson : Social Mobility and Social Class in Industrial Communities in Closed Systems and Open Minds. Oliver & Boyd, Edinburgh.

16.24 The characteristics and motives of people in Classes IV and V cannot be described with any certainty since they represented only 5% of our respondents. It is clear, however, that they are the group of people least likely to move from North East Lancashire under present conditions.

Future Migration and the New Town

16.25 We consider that the new town development will have little net effect on the numbers of Class I and II migrants leaving the study area. The field of opportunity for these migrants is already nationwide, which suggests that Central Lancashire New Town will add little to the absolute number of such migrants, and even if the scale of movement does increase experience suggests that they can, and usually must, be replaced by their employers. There is, however, likely to be some diversion of such migrants who would otherwise move to more distant destinations, for there is often a basic predisposition to remain in or near the home area provided that the quality of job opportunities and environmental standards are equal to what could be obtained elsewhere (see Appendix B).

16.26 Before we consider the probable effects of the new town on the future movement of other kinds of people it is useful to recall certain of our projections of the future of the study area without the new town development :-

a) There is likely to be a slow growth in a few sectors of manufacturing and service industries and a rapid decline in others. Total job opportunities may fall. There is, in addition, no evidence of a radical change in the range and quality of the jobs available.

b) The rise in incomes which will probably take place in the study area will be at a somewhat slower rate than either that of the region or of the country as a whole. The present difference between prosperity and prospects in the study area and other expanding areas is likely to widen.

c) The prospect for future extensions to the present range of commercial, educational, entertainment, cultural and recreational facilities seems limited, so far as present trends indicate.

It is against this background that we examine the likely propensity to migrate of certain other active groups of the study area. Skilled workers, at present, seem to be particularly sensitive to the fact that their present remuneration prospects and security of employment compare unfavourably with those of other areas. They appear too,to be influenced in their decision to move by their dissatisfaction with living conditions in the study area. In view of the likely future conditions without the new town it is reasonable to expect an increase in the numbers of this group leaving the subregion.

16.27 We have already pointed out that the numbers of people in the 15-39 age group are expected, in the absence of migration, to increase substantially in future. This is the group which under any circumstances is most likely to move away from the study area. The younger people in our surveys were particularly dissatisfied with their job prospects and the lack of up-to-date facilities in North East Lancashire, and the better educated were in a majority of cases obliged to leave in order to find suitable employment. Younger emigrants too were well represented among people who moved to large centres (Appendix B). With the anticipated improvements in education and technical training, and the increased numbers of younger more mobile people in the study area, it seems reasonable to expect the numbers of emigrants in this group to increase substantially in the future.

16.28 On the basis of what we have learned from our survey of the motives of skilled people in leaving the study area, and on the observed behaviour of the younger groups of emigrants from North East Lancashire, we would suggest that the new town would exercise a powerful attraction in both cases. It is our contention that, even in the absence of the new town, the numbers of such people leaving North East Lancashire will probably increase quite substantially in future. With the new town there will, in all probability, be a considerable diversion of such people from other destinations further afield.

16.29 We have now dealt very broadly with the likely effect of the new town development in diverting emigrants from other destinations, and the attractions it will have for people who might otherwise not have moved from North East Lancashire. We have suggested that a considerable proportion of present emigration from the study area is unresponsive to a change of the kind which the new town would represent. We should expect these flows to continue under any circumstances. The remainder consisting of economically active heads of households and their families, is not uniformly responsive to local changes in economic opportunity. In particular, a large proportion of this remainder consists of 'spiralists' who move much more frequently and over longer distances than other migrants. The remaining types of active migrants are those who fall into the broad Census classes of skilled and unskilled workers. Skilled and unskilled possess, as we have noted, very different movement characteristics. It is in our view the skilled worker who will be most influenced in his willingness to emigrate by the changes we anticipate in conditions within the study area, and in its position compared with other parts of the country as far as wages, prospects and security of employment are concerned. The anticipated rise in the numbers of people in the younger age groups in the study area, against a background of the expected conditions there, will be accompanied by a disproportionate increase in the numbers of such people leaving. The new town will probably prove attractive to both types of migrant. It is likely therefore to have two effects. First it may divert a part of the movement which is likely to occur in any event, especially after 1981, to an area close to North East Lancashire. Secondly it may induce people to leave the study area who otherwise might not have moved. The net effect on migration from North East Lancashire and the implications for total population change are set out in Section 20 below.

16.30 We shall turn to a discussion on the third effect of the new town in inhibiting migration from the study area after a discussion of the likely effects of the new town on the labour market and on journey to work patterns.

Section Seventeen

The labour situation

The Labour Situation

17.1 Our studies of the labour situation in North East Lancashire have covered a number of aspects - unemployment/vacancy rates, earnings differentials journey to work patterns and the redeployment of redundant workers. These studies are described more fully in Appendix J. Our primary conclusion is that, though North East Lancashire stands at some disadvantage at present in relation to the Central Lancashire area in terms of earnings, differentials are not sufficient to induce an appreciable movement of workers between the two, either by daily travel to work or by migration. This is not altogether surprising if one considers the size of the existing earnings differentials. It is clearly not worth the extra time and cost involved in a daily journey from Blackburn to Preston, for example, in order to earn an additional income of up to a pound a week. The difference between earnings increases as one moves east from Blackburn, but so does the time involved in travelling, and once again one would expect no daily movement of workers of any great magnitude under the circumstances. The real alternative for a person living to the east of Blackburn who is unable to find suitable employment locally is to consider moving outside the area altogether. Considering the costs involved in such a move, and the level of earnings which must be attained in order to recoup these costs over a relatively short period, it is clear that other areas are much more attractive destinations than Central Lancashire. Our migration survey did not therefore reveal any substantial movement between Central and North East Lancashire for work reasons.

17.2 Our investigations have shown how the prosperity of an area and the rate of growth of local employment opportunities appear, not unnaturally, to influence the movement pattern of resident workers. One reason, for example, for the greater importance of the Fylde towns and to a lesser extent of Southport and Wigan, as present suppliers of labour to Central Lancashire, has been the relatively slow growth of employment opportunities in these areas, particularly in the metalworking industries. Evidence on this point is necessarily incomplete, however, in view of the time scale of the project. Clearly, then, the pull of certain areas for labour depends not only on the general level of earnings and prospects for promotion, but also on how these compare with areas which are sources of labour either by migration or journey to work. The role that other factors play in the movement of people - housing conditions, facilities and amenities, climate and so on, has been sufficiently stressed elsewhere in this report. Although the evidence before us on the response of labour of various kinds in North East Lancashire and in neighbouring areas to differences in earnings and prospects is incomplete it is still possible to give a fairly clear indication of the likely course and the events which will follow from the development of the new town along the lines currently proposed.

17.3 We have shown that earnings in Central Lancashire are at present well below the national average. This difference is not likely to persist with the development of the new town for the following reasons:-

a) It is anticipated that a relatively high proportion of new units will be in the engineering and metal processing industries which tend to offer above average rates of pay and a relatively low proportion in low wage sectors such as textiles, clothing and footwear and leather goods.

b) Many of the new units will be branches of national firms based in developed industrial areas and paying, at their headquarters, rates which will be higher than those of Central Lancashire. They will probably be obliged by trade union pressure to pay comparable rates in the new unit. Any workers transferred to the new unit would certainly expect to be paid at the same rate as previously.

c) Workers who move to the area under overspill agreements will be unwilling to accept lower paid employment especially since most items in their budget are unlikely to become less expensive.

d) In any development of the scale of the new town temporary shortages of specific kinds of labour will undoubtedly occur. Consequently wage rates will tend to increase for such occupations. Here, in all probability, a ratchet effect will operate so that the increased rates will persist and form the base for subsequent normal increases.

It is difficult to see why any difference should remain between earnings in the new town and those which prevail nationally when the proposed development reaches its target population.

17.4 Well before this parity is attained rising wage levels in Central Lancashire will have begun to attract workers from outside the area. It is interesting to examine the experience of the Merseyside conurbation, an area which has received a number of new units in recent years. Although considerable numbers of new jobs have been created in Merseyside as a result of its Development Area status, unemployment has remained above the national level. Notwithstanding this, the labour market has become increasingly tight for certain skilled occupations, in particular those in engineering. This situation has been reflected in a rapid rise in earnings. During 1962-64 wage rates on Merseyside appeared to be increasing at a rate 1% above national. In the following two years the difference appears to have risen to about 4% in hourly earnings, and to perhaps 7% in weekly earnings. It would be unwise to regard this pattern as one which will be precisely paralleled in the new town since there are many differences between the two situations. Nevertheless it is important to realise that wage rates in a given area may, under increasing pressure in the labour market, exhibit rates of change vastly different from the national average. If rates in the new town were to outstrip those of neighbouring areas in a similar way, the area would become a real alternative to other parts of the country for the intending migrant and a powerful magnet to those willing to travel to work. In order to ascertain the scale of movement which can result from the establishment of a large new industrial unit offering consistently high earnings and the prospect of high car ownership, we have examined the experience of several new firms in the Merseyside conurbation. The results of this inquiry are discussed in Appendix G. They are, in brief, that :-

a) The geographical area from which employees travel is extremely wide, particularly with regard to staff employees, although over a quarter of hourly rated employees travel over 10 miles.
b) Many of the workers attracted by the new firms are people with stable employment records, who may well be attracted less by immediate financial advantages than by the longer term prospects, including promotion.
c) Workers are drawn not only from firms in the same industry as the new firm but also from others, particularly if pay and conditions are unfavourable.

17.5 It could well be that the habits and attitudes of the existing labour force in North East Lancashire are such that jobs in the new town will not induce these kinds of movement. We have already pointed out that journey to work distances in North East Lancashire are considerably shorter on average than in the country as a whole.* The extent to which the new town development may induce journey to work movement from North East Lancashire will clearly depend on future communication facilities between the two areas. The experience of Merseyside firms appears to indicate a substantial change in the willingness of people to undertake considerable journeys to work. Many of the journeys involved daily travel times considerably in excess of those which would be necessary, with improved communications, between the area east of Blackburn and the new town.

17.6 It would be wrong to give the impression that in future all wages in Central Lancashire will be high and all wages in North East Lancashire low in comparison. We have already discovered considerable variations within both areas. It was found in a recent study** that, considering hourly earnings, of 77 male manual occupations, 49 had a spread between the highest and lowest of more than 50%, while 12 had a spread of more than 100%. There were, moreover, very large variations in the increase in hourly earnings. Further, and this is particularly significant in the present context, there was no clear connection between the rates and increase in rates, and the changes in the numbers employed. This suggests that in some instances it may not be necessary for North East Lancashire employers to match the increases given in the new town in order to retain their workers. We should therefore not wish to imply that the impact of the new town will be all pervasive in the labour market.

17.7 There are, however, groups of workers for whom the impact may well be pronounced. These are :-

a) Experienced manual workers, often skilled, who are suitable for promotion to supervisory positions, but whose prospects with their existing employer are poor. In general, while some supervisory posts in a new unit are filled by workers transferred from the company's other plants, the majority of supervisors will be recruited locally. These people will, moreover, have had no previous supervisory experience. A sample of foremen from 8 firms in our survey showed that only 22% had been previously employed as foremen.

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* This is confirmed by the Government's Social Survey on 'Labour Mobility in Great Britain'

** D. Robinson in 'Personnel' - December 1967

b) A wide range of occupations whose members we may call technicians, where it is usual for branch factories to rely on locally recruited workers. These will not generally be trained on the job like foremen. A sample survey showed that only 8% were previously not employed as technicians.

c) Employees of smaller firms, insofar as they fail to offer competitive rates of pay. This appears to have been the case on Merseyside and may well apply to the new town.

d) Those workers whose earnings are well below average at present, having a restricted personal mobility, who may be expected to take the opportunity of acquiring the means to extend the area available for their choice of job.

17.8 We must finally stress the differential nature of the probable impact of the new town in the North East Lancashire labour market. We have attempted to show how different firms, workers in various industries at different levels, and workers in different areas might be affected. The analysis has concerned itself with the pull factors in the future situation. It should be stressed that should economic and other conditions in North East Lancashire be such as to push workers away from the area, then the new town is likely to be a far more powerful magnet than at present.

Migration versus Journey to Work

17.9 For areas within a certain radius daily journey to work will be an alternative to migration to the new town. The choice between these alternatives will not necessarily be a straightforward one. We have seen that North East Lancashire possesses a large stock of housing more than sufficient in quantity if not in quality to meet the requirements of its reduced population. The range of accommodation available for purchase or for rent seems quite considerable and the levels of prices and rents compare favourably with many of the surrounding areas. We have found evidence, for example, of people moving into the subregion to take advantage of these conditions. Conversely, emigration for housing reasons was relatively limited in our survey.

17.10 The movement of people to the London new towns seems to have been primarily motivated by dissatisfaction with housing conditions in the Metropolis*. The number of people leaving North East Lancashire because of overcrowding, shared facilities, and so on is not likely to be high. It is conceivable, however, that certain people will wish to improve their housing standards and that the newly constructed dwellings in the new town will have some attraction for them. Any improved public or private housing which is available will generally be at prices which will compare unfavourably with the levels which people are asked to pay in North East Lancashire.

17.11 Table 17.1 shows the average level of annual housing costs in the Areas of the subregion. The present average rent charged by the Skelmersdale New Town Corporation for a three bedroom house is 58/-, i.e, approximately double that of the average for North East Lancashire. Clearly, persons moving directly to the new town will require a substantial rise in earnings in order to compensate them for the cost of removal, plus the higher weekly outlay on rent and rates if housing costs in the new town were comparable with those of Skelmersdale. The result may be a decision on the part of many people to remain in the Blackburn Area where modern housing, both public and private, is likely to be available, and to travel daily to work in the new town.

17.12 It is probable in our view that the effect of the new town on both types of movement, the migration of households and the daily journey to

TABLE 17.1 AVERAGE WEEKLY RENT LEVELS IN NORTH EAST LANCASHIRE

	2 Bedroom Date of Construction		3 Bedroom Date of Construction	
	Pre-1945	1945-64	Pre-1945	1945-64
Blackburn Area	18/-	29/-	20/-	26/-
Burnley Area	20/6	24/-	22/-	27/4
Rossendale Area	19/-	24/6	23/-	27/4
North East Lancashire	19/-	25/9	21/6	27/-

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* The purpose of the Industrial Selection Scheme is, of course, to ensure that those people most in need of housing are selected for the new town.

work, will result in a "cascade" of movement from east to west. Such a pattern of movement appears consistent with a situation where :-

a) the majority of daily journeys to work occur over relatively short distances.

b) the effect of distance on the movement of households is pronounced - this is particularly so with moves for reasons associated with housing.

c) the 'gradient' for earnings and prospects is sufficiently steep.

17.13 We have already suggested that a pattern of movement from east to west of the subregion might occur without the new town as a result of the anticipated differential growth in employment opportunities in the different parts of the study area. The effect of the new development may be, therefore to accentuate what might otherwise have occured.

17.14 The effect of improved communications and increased car ownership will be to extend the area within which it will be possible to work in the new town. Clearly if, as we suggest, the employment opportunities of Central Lancashire prove attractive to substantial numbers of workers in the areas close to it, and these workers travel daily to the new town, a roughly equal number of workers must flow in to replace those who leave if local labour shortages are not to develop. Such movement will be more likely if communications within the study area from Blackburn through to Nelson and Colne are improved to the point where such daily moves are possible.

17.15 The extent to which such a cascade of movement develops has, of course, important implications for emigration from North East Lancashire. When the decision to emigrate is prompted by dissatisfaction with the number and range of jobs available within an acceptable distance for daily travel the cascade effect, representing as it does a widening of job opportunities for each town in the chain, may have a considerable inhibiting effect on emigration. Our migration survey results certainly suggest this. The likely magnitude of such an effect, whether it might take the form of short-distance household moves or daily journey to work, is very difficult to specify. It is enough, at this stage, to remark that it is something which could be induced by appropriate communication improvements.

Burnley Area of some 4%. In Rossendale, the effect will be about 1%. This is, however, before taking into account the population aspects of impact. It can be seen that the impact will be greatest in the distributive trades and, in Blackburn, in professional services. This latter is the result of our assumptions about the possible future location of hospitals and establishments of further education. If, however, Blackburn can influence the location of these successfully the impact in the professional services categories will be considerably cushioned. When the probable effects of the new town population are taken into account, service employment will be as shown in Table 18.2. The overall result will thus be a reduction of some 10% in the level of service employment. Approximately half of this will be the result of population loss, while the remaining half will be caused by the additional draw of the new town's service industries. The table shows, however, a continuing growth in service employment over the present situation.

Town Centres

18.4 Most town centre functions will be affected by the new town in two ways. First by the trade lost directly to the new town, and secondly by the loss of spending power owing to increased emigration. We have evaluated these two effects in fairly close detail in the case of retail trade and offices, and have made some broader judgements in the case of other town centre activities.

18.5 Convenience goods are conventionally classified as those sold by food shops, confectioners, tobacconists and newsagents, for which the customer is unlikely to travel any great distance. We analysed the pattern in North East Lancashire to see to what extent trade might be diverted from the subregion to Central Lancashire. It emerged that, although there did not appear to be any net loss of trade from the study area as a whole, exports did occur which were affected by distances to the nearest large centre, the flow of durable goods trade out of the subregion, and difference in the provision of shopping facilities, as measured by the hierarchy indices described earlier. Some 70% of the variation is explained by distance to the larger centre and the other variables contributed a further 10%. The exponential form of the model used in the analysis meant that extra distance had a cumulatively important effect. Application of the model to the distance between North East and Central Lancashire and a range of possible attraction factors indicated that a minimal amount of trade would be diverted. The only effect is likely to be due to people combining grocery shopping with trips for other goods. It is likely, however, that extra trips to Central Lancashire following the development of the new town would be for very specialised goods and therefore relatively infrequent. It is unlikely that groceries would be bought in the same way as they might during a regular trip for durable goods. This confirms therefore the previous conclusion that the effect of the new town on turnover in such goods is likely to be very slight. The loss of population, however, may have a more immediate effect. At 1961 spending levels, for example, our highest forecast for emigration with the new town might lead to an annual reduction of about £2 million, or 4% in convenience goods sales.

18.6 Consumers of durable goods, unlike those of convenience goods, are more mobile because of the greater importance of a wide range of choice. The new town, with its large new shopping centres is likely, therefore, to exert a considerable draw on North East Lancashire. To gauge the extent of this, the model mentioned in Section 13 and described in Appendix E was used. The same data as was used to

TABLE 18.2 EMPLOYMENT IN SERVICE INDUSTRIES WITH THE NEW TOWN

				IMPACT	
	1966	1981	1991	1981	1991
Employment per 10,000					
Blackburn Area	2025	2069	2156	137	155
Burnley Area	1923	1957	2018	84	89
Rossendale Area	1505	1573	1619	19	18
North East Lancashire Subregion	1934	1985	2050	104	120
Employment (1,000s)					
Blackburn Area	50.9	53.8	56.9	5.0	6.9
Burnley Area	32.9	32.9	33.8	2.0	3.5
Rossendale Area	8.0	7.4	7.1	0.2	0.3
North East Lancashire Subregion	91.8	94.1	97.8	7.2	10.7

predict the position without the new town was supplied to the computer except that different attraction factors were given to the shopping centres of the new town. The two sets of results were then compared to provide an indication of the additional trade that would be attracted to the new town because of its wider range of shopping facilities. In terms of 1961 spending powers, the results are shown in Table 18.3 for the five largest centres studied. It looks as though the new town will affect only Blackburn to any appreciable extent. The loss of trade for the other towns in the study area amounts to a fairly low proportion of the total. The towns not listed will scarcely be affected at all, as their trade is essentially localised in character and is not likely to be attracted to a large centre. In absolute terms, because of the continuing rise in consumers' expenditure, there will be healthy turnover increases in all the towns. All North East Lancashire towns will however be affected by loss of population. At 1961 spending levels, our (maximum) figure for emigration with the new town would indicate a reduction of about £1½ million annually in durable goods sales.

18.7 North East Lancashire is unlikely to be the location for any major office developments with or without the new town. The main activity in this sphere will probably be restricted to offices serving the local population. The new town may reduce this activity by affecting the size of the population which demands the services of such offices. It may also offer a wide range of office services and this may further reduce the market for such services in North East Lancashire. We attempted to quantify this effect in Section 9 which dealt with employment generally in the service industries. The combined effect of the two factors in employment terms is suggested in Table 18.4. The reductions shown in this Table will involve a reduction in floorspace of the order of 70-110,000 square feet - a reduction of approximately 5 - 10% in the total which might be expected without the new town.

18.8 The effect of the new town on other central area activities in the subregion is unlikely to be as marked as it may be on shops and offices. Large centralised entertainment facilities and some of the main motor dealers may gravitate to the new town but this will not have a substantial effect. Most of the other traditional town centre activities serve a very local market and a large centre nearby will not exert an important influence.

18.9 We assume that the effect of any possible loss of retail trade on rateable values will be of major interest to local authorities in the study area and we therefore attempt to estimate what this might be. We take the view that, because of the rapid increase in consumer spending, there will be no threat from the new town to any major redevelopment scheme in North East Lancashire. Looking at the 1961 turnover levels and comparing them with the rateable values (under the 1963 valuation system) for each town in North East Lancashire, and a number in the rest of the North West, we find a strong correlation. From this we can judge what the loss in rateable values would have been in 1961 if turnover had been lower by a given amount. We then take the impact estimates (also expressed in terms of 1961 spending power) and apply them to this framework. The durable goods trade in the future will probably form a greater proportion of total trade than now, so the impact estimates must be re-weighed to reflect this. These totals are then distributed among the towns according to their proportion of the two types of trade in 1961. The results are shown in Table 18.5. By this rather roundabout route we are able to take into account likely future changes in the pattern of retail trade and at the same time present the results in a form that can be compared with the known position today. It is clear that the effect will not be substantial. The loss for Blackburn amounts to less than 2% of the town's total rateable value. It was not possible for us to quantify the effect of reductions in office floorspace in the same way. However, a very rough guide can be obtained by comparing an estimate of some 200,000 square feet of certain detached offices in the town at the moment

TABLE 18.3 CATCHMENT OF STUDY AREA AND CENTRAL AREAS WITH THE NEW TOWN 1966-1991
(£ MILLION, 1961 SPENDING POWER PER HEAD - DURABLE GOODS ONLY)

				IMPACT	
	1966	1981	1991	1981	1991
Blackburn CB	6.1	6.5	6.4	-.41	-.91
Burnley CB	4.5	3.4	3.4	-.05	-.12
Accrington MB	2.3	2.5	2.3	-.04	-.09
Nelson MB	2.0	2.0	1.8	-.03	-.06
Darwen MB	1.0	1.4	1.3	-.02	-.07
Total	15.9	15.8	15.2	-.55	-1.25

(excluding some Crown and other hereditaments) with a rateable value in offices of approximately £55,000. On this basis, there would be a loss in rateable values attributable to offices approximately as follows :-

Blackburn	£8,000 - £15,000
Burnley	£4,000 - £7,000
Accrington	£4,000 - £7,000
Nelson	£2,000 - £4,000

TABLE 18.5 ESTIMATED IMPACT ON RATEABLE VALUES 1991 (1961 SPENDING POWERS : CURRENT RATEABLE VALUES)

	Loss of turnover (£ million)	Loss of r/v (x £1,000)
Blackburn CB	2.16	51.4
Accrington MB	.49	12.6
Church UD	.02	.3
Clayton-le-Moors UD	.05	.4
Clitheroe MB	.12	2.1
Darwen MB	.28	4.7
Great Harwood UD	.06	.8
Oswaldtwistle UD	.09	.7
Rishton UD	.03	.4
Blackburn RD	.02	.3
Clitheroe RD	.02	.3
Burnley CB	.71	21.7
Barrowford UD	.02	.1
Brierfield UD	.02	.4
Colne MB	.12	1.8
Nelson MB	.31	5.2
Padiham UD	.05	.8
Trawden UD	-	-
Burnley RD	.03	.4
Bacup MB	.09	1.4
Haslingden MB	.07	.8
Rawtenstall MB	.14	1.9
Total North East Lancashire	4.90	108.5

18.10 The fact that the new town attracts shoppers from North East Lancashire means that they will derive some benefit from its proximity. People who would have been obliged to go to Manchester or Liverpool for certain kinds of purchases will be able

TABLE 18.4 IMPACT ON NUMBERS EMPLOYED IN OFFICES 1991

	Blackburn Area	Burnley Area	Rossendale Area	Total
Professional and Commercial	400	265	5	670
Central and Local Government	160	30	5	195
Total	560	295	10	865

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to make their purchases in the new town. They will save both time and money by doing this. People going to the new town instead of Blackburn or other centres will also gain by doing so. The gain will clearly exceed the additional time and money involved in making the trip otherwise, there would be no point in making it. We have attempted to quantify the value of these benefits on the basis of information gained by recent studies of the value of time spent travelling.* Our estimate of the benefits involved varies between £30,000 and £50,000 which would, assuming present rate structures, be sufficient to compensate for the losses in rateable income of the previous section. (It should also be remembered that the rateable income losses are maxima, since they presuppose 'high' emigration.) Benefits of a similar kind will be derived by users of other facilities. Lack of information on the likely movements involved prevents us from quantifying the gains involved.

Conclusions

18.11 There is likely to be a lower level of activity in both retail trade and office services in North East Lancashire if the new town is built. However, this will not be substantial as a proportion of the level of trading without the new town. Moreover, the effect on rateable values will probably be small while, at the same time, there will be some benefits associated with proximity to a large centre. Those that can be quantified and are associated with shopping journeys will more or less balance the loss in rate income from the loss of retail trade. Indeed, at the optimistic end of the range of forecasts, and allowing for some of the benefits that cannot be quantified, the advantages of the new town for North East Lancashire will very probably exceed its disadvantages.

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*cf. M.E. Beesely : 'The Value of Time Spent Travelling' - Economica 1965.
D.A. Quarmby : 'Choice of Travel Mode' - Journal of Transport Economics and Policy 1967.
P.R. Stropher : 'Predicting Travel Mode Choice...' - Traffic Engineering and Control. January 1968.

Section Nineteen

Manufacturing industry

19.1 The development of the industrial base of the new town in Central Lancashire is intended to contribute to the industrial revival of the whole of the North West Region. This will demand not only the attraction of major industrial units with good growth potential, but also the type of labour force and the various support facilities which are essential for the establishment of a successful industrial complex. The aim of this part of our study, therefore, is to assess the contribution this development will make to industry in North East Lancashire, and to assess whether this contribution outweighs any disadvantages which may be involved.

19.2 The effect of industrial development in the new town on that of North East Lancashire is discussed in this section under four main heads :-

a) The attitudes of manufacturing firms in North East Lancashire to the possible effects of the new town on their operations.
b) The possible development of industrial linkages between North East Lancashire and the new town.
c) The effect of the new town on the labour market in North East Lancashire.
d) The effect of the new town on industrial movement to and from the North East Lancashire Area.

Our conclusions are based on an analysis of about one hundred questionnaires received from firms in the study area, interviews with most of the firms employing over five hundred persons, and key smaller firms, and information and statistics supplied by government departments, regional bodies, local institutions and individuals in the area.

Attitudes of Firms

19.3 In the questionnaire to the manufacturing firms of North East Lancashire we asked :-

a) how they viewed their future without the new town, and
b) how they viewed their future with the new town

> particularly if there is a substantial growth in the metalworking trades

Their answers to (b) are summarised in Table 19.1, which shows the percentage of firms in each sector of industry giving a specified answer. The population orientated industry of food, drink and tobacco expressed the most optimistic views on improved trade (63%) and labour shortage (13%). The fact that only 13% of the firms in this industry expressed unfavourable views about the new town suggests that a substantial majority feel they can benefit from the development. In fact, the only industry with a markedly unfavourable attitude was the textile industry in relation to anticipated scarcity of labour (60%). Even without the new town, however, 30% of the textile firms envisaged a labour shortage, so the response shown in the table has to be discounted to some extent. Since the food and drink, metal goods and other industries did not feel that there would be a labour shortage without the new town, the figures give a fairly accurate assessment as to how these firms viewed the likely net effect of the new town on them.

19.4 It appears that firms in North East Lancashire feel in general that the only undesirable effect of the new town will be on the labour market. In some cases this is offset by expectations of improved trade. Overall, they regard the new town as likely to have no real effect on their operations - in many cases, the net effect was judged to be advantageous. This does not, of course, present the complete picture and we would not wish to draw final conclusions from it.

Possible Industrial Linkages

19.5 The growth of population, industry and industrial facilities envisaged for the new town poses the questions as to which activities will look to North East Lancashire industries as possible sources of supplies, and which as possible sources of demand.

TABLE 19.1 OPINIONS OF FIRMS IN VARIOUS INDUSTRIAL SECTORS ON THE EFFECT OF THE NEW TOWN ON THEIR OPERATIONS

	Food, Drink Tobacco %	Metal goods %	Textiles %	Others %	TOTAL* %
Improved Trade	63	16	-	27	23
Labour Shortage	12	21	60	27	29
Skilled Labour Shortage	-	16	-	-	6
No Labour Scarcity	25	-	20	20	13
No Difference	25	37	20	27	23
Overall Unfavourable	13	26	55	13	20

* This is unadjusted for Industry size.

Note: Figures do not sum to 100 since some firms gave more than one answer.

TABLE 19.2 GEOGRAPHIC DISTRIBUTION OF OUTPUT AMONG KEY INDUSTRIAL SECTORS IN NORTH EAST LANCASHIRE (1966)

	Central Lancashire %	North East Lancashire %	Rest of North West %	Other Areas %	TOTAL %
Engineering & Electrical goods	16.4	2.4	10.7	70.5	100.0
Food, Drink, Tobacco	15.6	25.4	43.2	15.8	100.0
Textiles	6.5	12.6	31.4	49.5	100.0
Paper, Printing, Publishing	3.3	6.1	27.3	63.3	100.0
Chemicals	2.3	3.1	16.3	78.3	100.0

THE STUDY AREA AS SUPPLIER TO CENTRAL LANCASHIRE

19.6 Table 19.2 gives some indication of the present geographical distribution of the output of certain key industrial sectors in North East Lancashire. Somewhat surprisingly, the strongest links with Central Lancashire are in the metal based trades. The food and drink and tobacco sector follows a close second mainly because of the brewery trade, and this has important implications for its future since it is mainly made up of population-orientated industries. In proportion to total output the linkages of the textile, chemicals and paper-printing-publishing sectors are relatively small, although in terms of actual volume, textiles compares favourably with the metal based sector. It is unlikely, however, that these industries will be important as possible linkages in the future.

19.7 Some direct conclusions can be drawn from Table 19.2. The growth of population in Central Lancashire will create a large potential market for certain consumer goods which will have to be supplied from nearby areas. The food-drink-tobacco sector in North East Lancashire already has existing outlets in the new town area and it seems unlikely these will be severed. Indeed we see from the comments of the manufacturers that they expect to obtain a large proportion of the growing market. From this point of view the effect of the new town is likely to be beneficial, although there may be some adverse effects on the labour supply for these industries. The paper-printing-publishing sector there may also enjoy the benefits of an increased demand for packaging. The greatest potential for a future Central Lancashire market lies, however, with the metal based industries in the study area. This cannot be concluded directly from the above output table since they are at present heavily biased towards supply to the aircraft industry and this is more of a national than a local market. However, it seems that the development of metal based activities in the new town can only be favourable from the linkage viewpoint (and this is supported by the manufacturers' comments), especially in the supply of subcontracting facilities. In order to examine this aspect further we must first gauge the types of facilities which might be required by the new industry and then assess the extent to which facilities in North East Lancashire meet these requirements.

19.8 Growth in the metal based sector of Central Lancashire will create additional demands for certain subcontracting facilities such as castings, mouldings, forgings, machining, finishing and assembly. Some of the new industries will retain their existing channels of supply or deal with the problem internally but, as our examination of firms who have recently moved to other areas has revealed, a large proportion will wish to establish links where possible with surrounding suppliers for regular batch production or for one-off supplies. We have also found that even if firms intend ultimately to develop such activities themselves some of them will require these facilities during their build-up phase. This latter point has important implications for firms in the subregion offering subcontracting facilities since the intake of new industry will be on such a large scale, extending over a period of at least twenty years, that a continuing demand for services of this kind may be anticipated.

19.9 The likely use of North East Lancashire facilities by new industry in Central Lancashire will depend first on the extent to which the facilities available in the study area match the requirements of the new industry, and secondly on the competitiveness of these facilities compared with those offered in other areas. The subcontracting facilities which are available at present in North East Lancashire cover a wide range of activities but are biased towards supplying the traditional textile market. Because of this the skills which have developed are concentrated on activities supplying a declining market, and adjustment to meet the requirements of modern growth industries is likely to be difficult. Finance is a further limiting factor in this adjustment since relatively large capital expenditure is required for the equipment necessary to supply, competitively, industries which are biased towards high precision requirements. Textile machinery firms, for example, are likely to have some problems in competing for subcontracting work, because their present plants are specialised for their own products.

19.10 Most of the firms which are at present capable of offering subcontracting facilities are small. The larger firms who would be capable of carrying out general subcontracting work within the region are generally subsidiary plants, and they are to some extent tied to the needs of associated companies in other localities. There are, however, exceptions, and some already offer a wider range of services. The larger firms have all expressed interest in diversifying into other markets. Their addition to the facilities offered by the small independent firms widens substantially the base of facilities available.

19.11 We conclude that the basic support facilities which are normally required for general engineering work are available in North East Lancashire, but more advanced facilities such as investment castings, heat-treatment and cold-working are unlikely to be made available by existing firms in the area although new units may well be established for this purpose.

19.12 For certain facilities North East Lancashire firms may be at a competitive advantage. The towns of the subregion are from eight to twenty miles from the new town area, whilst the North Manchester belt is twelve to thirty miles, West Riding about forty miles and Liverpool about twenty five miles away from Central Lancashire. Thus for demands which require quick delivery and close contact with suppliers the proximity and capacity of the North East Lancashire firms, which is much greater than that of the firms nearer other areas where development is taking place, would put them at a distinct advantage, second only to the Central Lancashire firms. Demand for goods of a low value/bulk ratio would also tend to be directed towards North East Lancashire firms.

19.13 The trend towards precision work and a higher value/bulk ratio means that transport costs are playing a diminishing role in the geographic distribution of sales. This means that for this type of facility North East Lancashire would have to compete with the more efficient firms in the Midlands who can provide long runs at relatively low prices. However, North East Lancashire firms could probably compete in the short to medium run category since most of the firms in the Midlands have difficulty in producing short runs at competitive rates. Short delivery times, especially important for jobbing work, will give an additional advantage to North East Lancashire firms even though their prices may be higher.

9.14 The fact that many firms in North East Lancashire are already competing successfully in the national market (e.g. in plating) suggests that they would be able to offer additional advantages for firms in the new town. Such competition expresses itself not only in price but also in delivery time and quality. North East Lancashire units providing the facilities required by new firms may therefore expect to obtain a share of this market. For the larger units offering a wide range of facilities distinct advantages exist.

19.15 To sum up we envisage North East Lancashire becoming a fairly important source of supply for certain subcontracting facilities required by industry in the new town. The market for precision work will also be large enough to warrant expansion into this field by many firms, and the share of the new town market which is attained will depend on how far North East Lancashire firms seize the opportunities offered them.

CENTRAL LANCASHIRE AS SUPPLIER TO THE STUDY AREA

19.16 There will probably be a substantial influx into Central Lancashire of major industrial units with national markets. It is anticipated, however, that some of these will be associated with supplying certain other industries in the North West Region as a whole. We obtained from North East Lancashire firms information on the types of supplies they have difficulty in obtaining and on the geographical pattern of their purchases. This study showed the high degree of vertical integration of North East Lancashire firms either independently, which means that most of their purchases are of basic materials rather than component supplies, or within their group so that they obtain their major supplies from other members of their organisation located elsewhere. It does not seem likely therefore that new industry moving to Central Lancashire will become important suppliers to North East Lancashire firms. Of the components which they do have difficulty in obtaining, very few would be suitable for production in the new town.

19.17 Many firms in North East Lancashire have, however, expressed concern as to the lack of provision of facilities which cannot be classed as major inputs in terms of monetary value. It is at this level that the new town can offer its greatest advantages for, associated with the development of the major industrial units, certain additional facilities lend themselves to establishment within the area. These are made possible because of the type of manufacturing base which will result, and particularly because of its magnitude. Under present conditions in the areas in question, and without a new town, it seems extremely unlikely that these could develop. Such facilities would include :-

a) Certain auxiliary units involved in maintenance, tooling and servicing activities.

b) Certain subsidiary or subcontracting units such as precision machining, precision casting, precision forging, heat-treatment and plastic moulding - which are unlikely, given the present size of the market, to be made available by existing sub-contracting units.

c) Certain producer services such as computing facilities, consulting facilities, training facilities and research and development facilities.

These facilities will, of course, be available to all industries in all areas, but it is likely that a substantial volume of their capacity will be taken up by industry within the North West Region for which they will possess the advantages of proximity. Therefore higher level industrial facilities will be available to firms in North East Lancashire which could be of direct benefit to them.

19.18 Certain firms in North East Lancashire have already expressed a desire to see such facilities made available locally. Difficulty in obtaining them has caused them to supply the needs themselves, often uneconomically, to go to distant suppliers, or to do without them altogether with adverse effect. It also seems certain that many firms would take advantage of the new situation, even though they do not at present use such advanced facilities, since this would greatly enhance their competitiveness with firms in other areas making a similar product. At the same time, and this is a major point, it would aid the move into more developed and general forms of engineering which is seen by certain firms to be a precondition of future stable growth.

The Labour Situation

19.19 We have discussed in Section 17 the possible impact of the new town on the labour market in North East Lancashire in somewhat general terms. In this section, we will make a few more specific points which emerge from the above discussion. The first point is that in the short run increased pressure on the labour market is likley to be found particularly in respect of workers possessing engineering skills such as fitters, toolmakers, turners and electricians. This is mainly because of the following factors :-

a) A substantial part of the new town growth in manufacturing is expected to be in the metal based industries.

b) Workers with engineering training are required primarily for maintenance in a wide range of the other industries which will make up the development. A sample of North East Lancashire firms revealed, for example, that such workers constitute about 5% of the total labour force in food, drink and tobacco industries, 5% in chemical industries, 3% in clothing and footwear industries and 7% in paper industries.

c) Experience in the development of other new towns has shown that the proportion of skilled workers in the immigrant population is relatively low, and certainly seems likely to be low in relation to the demand anticipated in Central Lancashire.

d) There is likely to be an increased demand for this type of worker within North East Lancashire. The extent of this increased demand will depend to a large extent on the increased demand for subcontracting facilities within the study area.

To summarise, we can say that the growth of the metal based industries in Central Lancashire will call for an increase in the demand for North East Lancashire workers who possess the relevant skills and, while the effect of this demand will be widespread, it will be concentrated especially on the engineering industries and particularly on those firms which are engaged in subcontracting.

19.20 It is difficult to see pressure building up to this extent in any other industry in the study area. It is not anticipated that there will be any appreciable growth in the other industries that are at present of particular importance in North East Lancashire such as textiles, clothing and footwear and in the Blackburn Area, paper-making, chemicals and brewing. It does not seem likely, therefore, that employers would lose many workers who have skills specific to these industries. What could well happen is that some of the lower paid workers in these and other industries who have less specific skills, or perhaps no skills at all, may be attracted to the new town. The biggest employer of this type of labour in the area is the textile industry and it is here the effect may be greatest. It should be stressed, however, that the impact on the market for less skilled workers may be extremely widespread and it must be borne in mind that considerable numbers of such workers are employed outside manufacturing in transport, distribution and local authorities. The effect on individual employers may therefore be small.

19.21 Although average earnings in textiles are relatively low it is not likely to suffer unduly in the short run from the increased demand for labour in Central Lancashire. This is because the low average earnings are due chiefly to the existence of ancillary jobs requiring little skill and which are usually done by women. There are, of course, many unskilled male textile workers - in a sample of twenty firms in North East Lancashire labourers comprised 8% of the total labour force - and some of these may seek semi-skilled work in the new town. However, the loss of these workers, although clearly unwelcome, would be far less serious than in the case of skilled workers if only because it is easier to recruit replacements. Of the remaining male textile workers many are in relatively skilled occupations in which earnings are, on the whole, competitive with those in most other industries.

19.22 The effect on the recruitment of male workers to textiles may be somewhat greater in the long run since new entrants to the labour force may consider that prospects are likely to be better in the growth industries. This may be particularly unfortunate in view of the greater requirements for male labour that may follow from the further spread of three or four shift working. However, it seems likely that these additional requirements may be difficult to satisfy in any event. As far as the effect on female labour is concerned, the impact of the new town may be quite different. It is to be expected that the decline in employment in textiles will particularly affect female workers, but it is most unlikely that many of them will take up employment in Central Lancashire.

19.23 The analysis of the available data, therefore, suggests a conclusion similar to that expressed by the firms in the area, that labour shortage may be intensified by the presence of the new town especially in textiles and in the skilled occupations associated with the metal based industries.

The Movement of Industry

19.24 We now turn to the likely effect of the new town on the movement of industry into the study area, assuming that both areas have no special assistance in the task of attracting firms. Development Area status as we have already mentioned, achieved some limited success in bringing new industrial employment to the study area. There was a significant inflow of larger units which now figure among the most important employers of labour in the subregion. The total number employed by these firms is, however, quite modest when we consider the period during which industrial location incentives were in operation. when Development Area status was removed the inflow of industry slowed down appreciably and was limited to a number of small firms.

19.25 The principal advantages which North East Lancashire has offered in recent years to industrialists wishing to expand have been :-

a) The prospect of a plentiful supply of certain types of labour, and

b) The availability of inexpensive industrial premises.

Both derive from the rapid decline in textile employment during the last 50 years. We have already indicated elsewhere in the Report that the labour released by the textile industry in its decline is in general no longer of the type easily adapted to certain other forms of industrial activity such as production line work. Again, we anticipate shortages of labour in certain parts of the study area, so that (a) above is no longer expected to hold with equal force in the future.

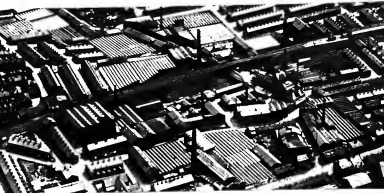
19.26 Vacant buildings formerly used by the textile industry are often attractive, because they are cheap, to a wide variety of forms of manufacturing. In general, however, the firms which take up this accommodation are quite small. The larger firms have generally moved into new buildings. We expect this advantage of the study area to persist with the anticipated further declines in textiles. The other reason why these buildings were attractive for industrial development has less force now than in the recent past. This is the requirement that industrial development on any scale must have a certificate of approval by the Board of Trade. Latterly the form of administration has changed in the direction of financial incentives rather than the control of physical development, so that mill buildings have become correspondingly less attractive to expanding firms from this point of view. This part serves to illustrate how changes in the emphasis of industrial control have affected the attractiveness of certain areas.

19.27 In general we conclude that under the present system of incentives, North East Lancashire possesses few advantages for industry on a large scale. The firms which go to the new town development would therefore have been unlikely to consider the study area as a location for expansion even in the absence of the new town.

19.28 The next question is whether the growth of manufacturing industry in Central Lancashire would make the study area a more attractive location for certain types of industry. We consider this to be quite likely since, as we have mentioned above, the area will continue to possess a stock of cheaper premises and will possibly have certain resources of available, mainly female, labour. There is in addition, the possibility of the labour force increasing sharply after the late 1970's. The industries which could come here would be those to which proximity to the new town would be an advantage, and would mainly be in the engineering industries and their ancillary activities. The following types of expansion might take place :-

a) Firms coming to the new town who wish to open branch plants in surrounding areas close at hand.
b) Firms coming from outside, generally of a support kind for industry in the new town, performing tasks which lead themselves to the kind of sites and labour which the study area has to offer.
c) The expansion of major plants already in the study area by the transfer to them of those forms of production which could benefit from proximity to the industrial base of the new town.

Industrial premises in the town centre of Nelson, part of which has been redeveloped since this photograph was taken



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Castle Street, Clitheroe

Section Twenty

Population and economic activity with the new town

20.1 The frame of reference for the following discussion is to be found in Section 11 which describes the future economic situation of North East Lancashire without the new town. The conclusions of that section were briefly that our forecasts indicate no radical change in the total numbers of people living in the study area in the next 25 years. The centre of gravity of the subregion will, however, continue to shift in the direction of the Blackburn Area, while the Burnley Area will probably not increase its population very significantly in spite of the modest natural increase which is likely to occur in the subregion. The Rossendale Area will continue to lose population by emigration. Migration from the subregion at a faster rate than that of immigration will continue even upon the assumptions concerning the future balance between jobs and people. Indeed, unless a complete revolution of the environment is achieved during the period under examination, and unless the prosperity enjoyed by the residents of the subregion approaches the levels attainable in other parts of the country, net emigration will probably exceed the levels suggested by job balance calculations. The desire for better living conditions and improved material prospects are major reasons for outward migration.

Migration to the New Town

20.2 The new town's possible effects on out-movemen from the subregion are described in Section 16. The results indicate a net additional movement of between 8,000 and 17,000 people to the new town by 1991 (Table 16.2). We regard the lower figure as rather unlikely, given the types of people we expect to find leaving North East Lancashire in future, and the likely qualitative attraction of the new development for the residents of the study area. The incidence of this flow will vary between the three Areas of the subregion and we have assumed a number of variations in arriving at forecasts of the total effect of the new town. The effect of the new town on net outflows is likely to be greater in the second decade of development than in the first. This has been allowed for in estimating the total effect on the study area.

20. It is important to know whether the figures for movement to the new town represent an additional net loss to the study area or whether it represents a diversion of the movement which would have occurred in any event. Our analysis of future employment prospects and living conditions in the study area lead us to believe that emigration will continue with a minimum out-movement of 36,000 persons by 1991. The main groups of people involved in this net loss of people will, we anticipate, be skilled workers and the younger age groups. Our analysis of the motivations and movement patterns of these groups suggests that the anticipated conditions of the new town will constitute a powerful attraction for them. The new town may well, therefore, attract a number of the people who would have left the study area under any circumstances to move to a location nearer their former home. Where journey to work is possible because of job opportunities in the new town, either directly or indirectly (see Paragraph 17.12 on 'cascade' movement), its presence will reduce emigration in cases where willingness to leave the subregion is associated with an inadequate range of employment opportunities.

Service Employment

20.4 In addition to the reductions brought about by emigration from the Areas of the subregion to the new town there will also be a direct reduction in the numbers of potential job opportunities in the service sector. This may apply particularly to Blackburn, the most important service centre and the one nearest to Central Lancashire. This possible effect is examined in Section 18. The major reductions in jobs will probably occur in the distributive trades and miscellaneous services and, in Blackburn, in professional services. This loss of jobs will be partly offset by the benefits derived from proximity to a range of higher order facilities in the new town which the subregion alone, in the absence of the new town, could not support. These benefits cannot, however, be measured with any accuracy in this study although the attempt we made suggests that they may be considerable.

Manufacturing Employment

20.5 The likely effects of the new town development on prospects for the manufacturing sectors of the study area are complex. The main growth industries in North East Lancashire, the metalworking industries, will benefit from the development of similar industry in the new town in two ways :-

a) By sales and purchases of goods and services to and from expanding firms in the new town. We have seen that the move into more diversified forms of engineering appears to certain of the larger firms in the study area to be a precondition of further growth. Such a move could be considerably aided by the development of appropriate kinds of new industry in the new town and a number of large concerns welcomed the prospect for this reason. The large number of smaller firms supplying subcontracting services to the engineering industries could also expect to benefit substantially from the industrial expansion of the new town.

b) By the use of auxiliary services and facilities essential to the development of industry, which the larger urban grouping will make possible. These are listed in Paragraph 19.17 and would, in our view, be of importance in assisting the general growth of industry in North East Lancashire.

From this viewpoint, therefore, the new town presents a new opportunity for firms in the expanding sectors of the study area.

20.6 The development of the new town will probably divert little industry which might otherwise have gone to the study area. Indeed, the growth of industry in Central Lancashire may have some beneficial effects on the study area's attractiveness for industry. Firms coming to the new town may, after a time, open branch plants in North East Lancashire and, as expansion proceeds, the study area's advantages of inexpensive industrial property, availability of certain types of labour and proximity to the growing town may induce other firms to locate there.

20.7 On the other hand, the growth of metalworking industries in Central Lancashire may attract considerable numbers of workers from the study area. The effect may be relatively slight on the large engineering establishments, but may prove more serious to the many smaller concerns. In addition, the employment opportunities of the new town will probably prove attractive to workers in a wide range of other industries, including textiles.

20.8 It is not easy to give a clear answer on the balance of effect on manufacturing industry. To the extent that the industry which goes to the new town will provide the basis for the industrial regeneration of Lancashire*, growth industry in the study area will be well placed to benefit from this expansion. It is important to realise that the beneficial and adverse effects of the growth of Central Lancashire New Town will appear over a long period of time. They can be anticipated and appropriate action taken. We return to this point later.

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* This, of course, is the basis precept of the 'Industrial Complex Study' for the Central Lancashire New Town Development. See also Terms of Reference.

Direct Effects and the Multiplier

20.9 A reduction in the projected population of the subregion, a reduction in the number of employment opportunities in the service sector and a future reduction in service jobs brought about by emigration to the new town may, together, be termed the first round effect on the job balance position of the study area. As an example of such an effect consider the following figures. Assuming that 6,800 people leave the study area for the new town by 1981, and that 70% of these leave the Blackburn Area, the population of the Area will have been reduced by 4,750. Associated with this loss of people there will be a maximum reduction of jobs in service employment of 1,050, quite apart from the direct reduction in service jobs of 4,100 so that the total loss of jobs will be about 5,800. To calculate the effect on the balance between jobs and workers we have to take account of the fact that some 2,150 workers will have migrated to the new town so that, in total (5,800 - 2,150) = 3,650 will be added to any anticipated gap between the number of jobs in the subregion and the expected workforce.

20.10 At this point we should consider the possibility of a second round effect in which the people unable to find employment leave the subregion*, causing a further reduction in service employment. Thereafter, the possibility of third and fourth round effects arise, and so on. At the end of a sufficient number of rounds the job balance position will have returned to the previous anticipated level with, of course, lower overall population and employment totals. (Both the 'direct' and the 'multiplier' effects are taken into account in our calculations.)

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* We are, of course, ignoring 'lags' in response throughout the argument.

Journey to Work

20.11 One major element is, of course, missing from the above argument. The numbers of resident workers and jobs available do not have to balance exactly for any given area. It is, in fact, quite unusual for them to do so, since journeys to work to and from other areas occur in normal circumstances. To take up our example again, if the 'surplus' 3,650 workers now unable to find employment locally are able to travel to the jobs elsewhere and continue to reside in the Blackburn Area, then there will be no second and higher order effects. We have already suggested that work journeys between North East Lancashire and the new town would increase substantially in the future (Section 17) although the exact level is open to discussion*. We consider, in view of this expected increase in net daily movement between the two areas, that multiplier effects on population and employment will probably be limited.

20.12 The possible development of 'cascade' movements of either households or daily travel to work complicates this simple picture. This concept is discussed in Paragraph 17.12. The extent to which such a pattern of flows develops, as opposed to direct movement to the new town is determined by the ease with which such short movements can be made, the extent to which road communication improvements are accompanied by improvement of the environment of the towns further to the east, and on the earnings and prospects gradient which develops between the various parts of the subregion. We consider that this is a plausible way in which the effects of the new town will make themselves felt in the pattern of movement of people. The development of such a pattern could bring considerable benefit to the more easterly areas of North East Lancashire, by increasing job opportunities and reducing the pressure to emigrate.

20.13 We have examined variations in the final population projections which might arise on the basis of assumptions concerning the following factors :-

a) Alternative levels of the incidence of migration to the new town for each Area of the subregion.
b) Possible variations in journey to work flows both internal and external to the study area.
c) Various levels of the response of service employment to changes in population catchment.
d) Variations in female activity rates.

The results are set out in Table 20.1. These figures may then be compared with those in Table 11.3. The same qualifications apply to the absolute levels and the results shown are indicative only of the maximum relative change between the two situations. The final population figures given in Table 20.2 show clearly that the total effect will be most marked in the Blackburn Area, considerably less in the Burnley Area and slight in Rossendale. Taking our alternative figure of 13,000 people leaving the study area for the new town and with the same set of restrictive assumptions we obtain a lower maximum total movement of about 17,000 people compared with our upper figure of about 22,000.

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* We have already remarked that existing commuting models cannot adequately simulate the effects of the new town on journey to work flows.

TABLE 20.1 POPULATION LEVELS ASSUMING MAXIMUM NEW TOWN IMPACT

	1966	1981	1991
Blackburn Area	251,000	260-264,000	264-267,000
Burnley Area	168,000	168-170,000	170-172,000
Rossendale Area	54,000	44-49,000	43-44,000
North East Lancashire	473,000	472-483,000	477-483,000

TABLE 20.2 POPULATION LEVELS WITH AND WITHOUT THE NEW TOWN : MAXIMUM IMPACT

	1966	1981 With	Without	1991 With	Without
Blackburn Area	251,000	260-264,000	265-270,000	264-267,000	275-280,000
Burnley Area	168,000	168-170,000	170-173,000	170-172,000	175-178,000
Rossendale Area	54,000	44-49,000	45-50,000	43-44,000	45-46,000
North East Lancashire	473,000	472-483,000	480-501,000	477-483,000	495-504,000

20.14 It should be stressed that in our view these figures represent the maximum possible impact on population totals for North East Lancashire. We consider it very unlikely that the net effect of the new town will be as large as the figures suggest. They are based on the following restrictive assumptions :-

a) That all movement from the study area to the new town is a net addition to expected future emigration; we have already stated that we expect a significant diversion of those who would, in any case, leave the study area.

b) That the effects of the growth of industry in the new town on the prospects for developing manufacturing industry in the study area are not measured. We have indicated that both plus and minus effects could occur. On balance we anticipate a positive effect, stemming from the additional opportunities afforded to the major growth industries in North East Lancashire.

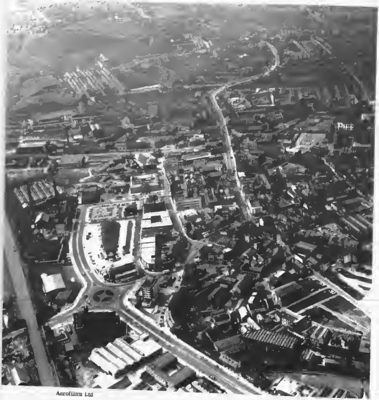
c) That no substantial additional 'cascade' effects in journey to work or household movement occur. These movements cannot be adequately predicted and quantified, since how far they develop depends on policies adopted for study area communications, renewal and rehabilitation.

20.15 It has not been possible for us in view of the multiplicity of possible substitution effects to set a minimum figure to the anticipated effect on population. The maxima we have given have been used to calculate the effects on the town centres of the study area and for the assessment of future living conditions. Our attempts at estimating the set of conditions which would produce a minimum impact have, however, enabled us to begin to formulate a possible planning strategy for the study area with the new town (Section 23).

20.16 Out-movement of people will, of course, have repercussions on the prosperity of the areas they leave. In retail trade, for example, using the 'high' figures there will be a loss of some £2 million in trade in convenience goods (at 1961 prices) and a further £1½ million in durable goods. This aspect has already been examined in Section 18 and the effect on the future of the study area centres, given anticipated future increases in consumers' income and expenditure, is shown to be slight. Similar remarks apply to the other forms of commercial development. At any rate none of the present town centres schemes are in any way in danger from the development of the new town. The effect of loss of custom on rateable values has also been estimated and shown to be largely offset by the benefits of proximity to a large shopping and commercial centre.

20.17 Our overall best estimate of the additional migration movement as a result of the Central Lancashire New Town development is a figure of the order of 10,000 to 15,000 by 1991, that is to say, an additional maximum pull of about 20,000 less a considerable 'diversion effect' of those who would otherwise have left the subregion for other destinations. The figure also assumes that conditions will allow for a much increased daily journey to work from the western parts of the subregion.

THE EASTERN SECTION OF BURNLEY CENTRAL AREA FROM THE NORTH



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Section Twenty One

Living conditions

Introduction

21.1 In this section we compare the living conditions that might be enjoyed in the future in Central Lancashire and in North East Lancashire in the event of the new town being built. The comparison is made difficult by two main factors. First, it is difficult to make a quantitative measurement of relative environmental quality and secondly, the future reaction of the people of Central and North East Lancashire to changing living conditions provides an unknown element. On the basis of the information in Sections 12 and 15 we have, however, attempted to measure the impact of the new town upon the subregion. We also suggest how the imbalance between the two areas might be righted so that North East Lancashire does not suffer by comparison with the new town.

Comparison

THE SETTING

21.2 The site for the proposed new town satisfies the main economic requirements for a major growth point and has inherent climatic, geographical and topographical advantages over North East Lancashire. It is situated on the national motorway network and on the main north/south railway route. It has plenty of level ground suitable for development while the study area is situated in a valley complex in which well over half the land surface is above 600ft. The valley situation causes the constant problem of temperature inversion which does not affect the new town area and which aggravates the effects of air pollution in the study area. In addition, the new town area has more hours of sunshine and less rainfall.

21.3 The existing urban communities of Central Lancashire at present enjoy higher housing standards and better living conditions than those of North East Lancashire. Preston has always been a regional centre and has therefore been less affected by the decline of the textile industry than either Blackburn or Burnley. There has been continuing employment in trade and administration as well as diversification to new manufacturing and service industries. Decaying areas of 19th century bye-law housing are being demolished and new high flats cluster about the shopping centre of the town which stands on a bluff overlooking the Ribble flood plain. Leyland is dominated by the vast industrial area around Leyland Motors. While at present it gives an impression of formlessness and lack of identity, it has a strong industrial base and ample land available for growth. Chorley is a pleasant town in a good setting with a balanced employment structure. Within the proposed new town area there are also extensive areas of recent suburban housing which lack coherent form or character.

GROWTH AND DECLINE TRENDS

21.4 While the study area experienced a sharp rise in economic activity during the 19th Century and has since undergone serious decline Central Lancashire has enjoyed a long period of less dramatic but sustained growth. As a result its housing and facilities are generally in better condition. Environment, with the climatic differences already mentioned, makes a significant contribution to the relative attractiveness of the two areas. Very many emigrants from the study area move towards the western coast of Lancashire for a better climate and environment. While there are large inflows of people into the subregion as well as outflows the net loss of population by migration is undoubtedly influenced by these factors.

21.5 In order to impart a clearer understanding of the relative standards enjoyed by Central and North East Lancashire we have developed a system which, attempts to compare and quantify the basic differences. We have compared Central and North East Lancashire with Northamptonshire. This third area has been selected because while it has a generally similar geographical situation it is experiencing economic growth. It is similar to Central Lancashire and North East Lancashire together in respect of distance from large conurbations, situation in relation to the national motorway network and the size and placing of its towns. Comparisons were made between the three areas and also between the following county boroughs: Blackburn and Burnley; Preston; Northampton.

21.B The system attempts to identify as many significant influences on living conditions as possible. We listed all the possible changes likely to occur in a context of growth or decline and selected those which had the greatest number of interactions with and influence over other factors. This process of selection, together with the availability of statistics produced the following list of key factors:

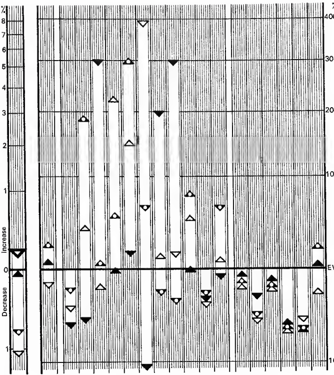
ECONOMIC	SOCIOLOGICAL	ENVIRONMENTAL
Activity rate Employment	Population Age structure	Climate Quality of housing
Proportion of manufacturing to service employment	Socio-economic structure	Land use distribution
	Prosperity	Availability of central area functions
	Vehicle ownership	Quality of retail facilities

Economic factors have been included here because of their interaction with the other factors although they have also been dealt with in earlier sections.

21.7 Statistics for all the key factors for the years 1951, 1961 and 1966 were compared and related to national trends so that growth or decline in a particular area could be viewed in an overall context. The norms used for comparison are described in the accompanying figures (21.1 to 21.4). Although only 1961 statistics have been plotted in the figures arrows have been used to indicate trends revealed by the 1951 and 1966 information and thus to present a dynamic rather than a static picture of differences. Few, if any, of the factors can be taken in isolation and termed positive or negative according to whether they lie above or below the norm. When, however, the factors are shown together there is an accumulation of sufficient evidence to show how living conditions in the three areas will differ.

21.B The activity rate in North East Lancashire has been decreasing more rapidly than in the other two areas at a time when the national average has been increasing slightly (Fig. 21.1). The decline has been less pronounced in the Blackburn and Burnley County Boroughs (Fig. 21.2) than in North East Lancashire as a whole. This trend, together with increasing emigration, the present low overall standard of environment shown by the rate structure, the decreasing retail turnover per person employed and the level of vehicle ownership (see Figs. 21.3 and 21.4 shows a lower than average level of general prosperity.

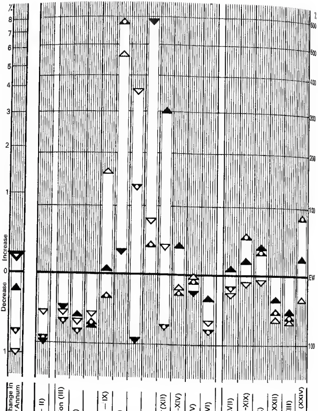
21.9 The employment structure of North East Lancashire shows a continuing dependence on the declining industry of textile production. (Fig. 21.1). Central Lancashire was less dependent upon textiles and has a more diversified employment base in such industries as chemicals, growing heavy engineering



Key:
◭ Great Britain
△ North East Lancashire
◬ Central Lancashire
▲ Northamptonshire
EW England & Wales average

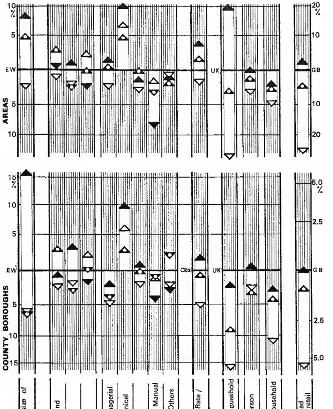
Note: In the case of EMPLOYMENT STRUCTURE, the excess or deficiency of each area in a given industry has been shown as a percentage above or below the England & Wales average proportion per 10,000 persons in employment.
Direction of arrow indicates 1951-1966 trend

Figure **21. 1** Comparison of the ACTIVITY RATES and EMPLOYMENT STRUCTURE of the selected areas 1961.



Note: In the case of EMPLOYMENT STRUCTURE, the excess or deficiency at each town in a given industry, has been shown as a percentage above or below the England & Wales average proportion per 10,000 persons in employment.

Figure 21.2 Comparison of the ACTIVITY RATES and EMPLOYMENT STRUCTURE of the County Boroughs of selected areas.

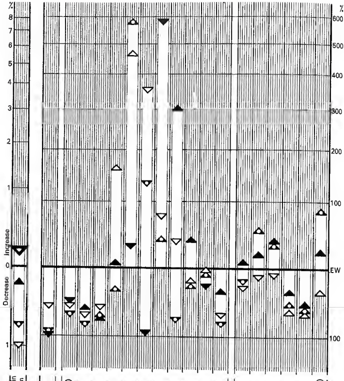


Key: △ N.E. Lancashire (or Blackburn & Burnley)
◬ Central Lancashire (or Preston)
▲ Northamptonshire (or Northampton)

EW = Changes in size and structure of population of England & Wales taken as norms of comparison
CBs = Average for all County Boroughs taken as norm
UK = United Kingdom averages taken as the norm
GB = Great Britain's turnover/head employed in retail taken as the norm

Note: Excess or deficiency shown in percentages above or below the selected norm.

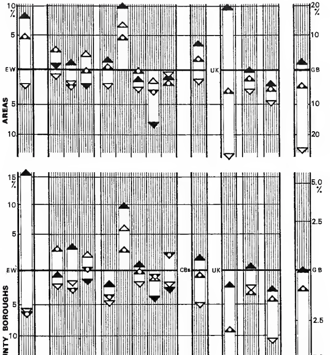
Figure **21.3** Comparison in SOCIOLOGICAL FACTORS of the areas and the County Boroughs (Size and Structure of Population, Prosperity Index, Mobility, Spending Power)



Key:
▲ Great Britain
△ Blackburn & Burnley
◬ Preston
▲ Northampton
EW England & Wales average

Note: In the case of EMPLOYMENT STRUCTURE, the excess or deficiency at each town in a given industry, has been shown as a percentage above or below the England & Wales average proportion per 10,000 persons in employment.

Figure **21.2** Comparison of the ACTIVITY RATES and EMPLOYMENT STRUCTURE of the County Boroughs of selected areas.

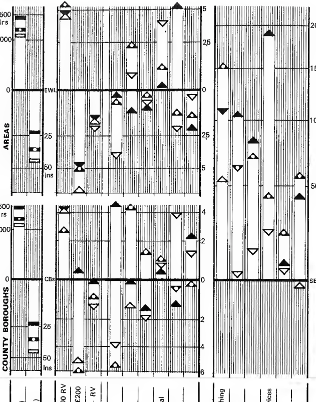


Key:
△ N.E. Lancashire (or Blackburn & Burnley)
◬ Central Lancashire (or Preston)
▲ Northamptonshire (or Northampton)

Note: Excess or deficiency shown in percentages above or below the selected norm.

EW = Changes in size and structure of population of England & Wales taken as norms of comparison
CBs = Average for all County Boroughs taken as norm
UK = United Kingdom averages taken as the norm
GB = Great Britain's turnover/head employed in retail taken as the norm

Figure **21.3** Comparison in SOCIOLOGICAL FACTORS of the areas and the County Boroughs (Size and Structure of Population, Prosperity Index, Mobility, Spending Power)



Key: △ or ▭ N. E. Lancashire (or Blackburn & Burnley)
△ or ▣ Central Lancashire (or Preston)
▲ or ■ Northamptonshire (or Northampton)

Note: Excess or deficiency shown in percentages above or below the selected norm

RV = Rateable Value
EWL = England & Wales less London taken as norm of comparison
CBs = Average for all County Boroughs as norm
SEE = Proportion/10,000 persons in industry of the surrounding Employment Exchanges as norm

Figure **21.4** Comparison in ENVIRONMENTAL FACTORS of the areas and the County Boroughs (Climate, Quality of Housing, Land Use Distribution and availability of Central Area Functions).

such as vehicle building. Northamptonshire has for years been dependent on the more resilient side of textiles such as the manufacture of clothing and footwear and has been diversifying to chemicals, electrical engineering and metal goods.

21.10 In North East Lancashire the provision of professional and other services has declined significantly in relation to the national norm which has shown a continuing increase over recent years. The numbers of managerial and clerical workers has also been declining as a proportion of the population. In Northamptonshire, in contrast, the rising service employment, the general increase in rateable value (Fig. 21.4) and the very rapid increase in the professional, managerial and particularly the skilled technical employment groups, gives a picture of continuing growth. We feel that this comparative method for the assessment of growth and decline trends in living conditions offers an approach which might be of considerable general interest.

21.11 There are further influences on living conditions which cannot be presented in statistical terms. One important point of contrast between Central and North East Lancashire is the different administrative structure. Our study area contains 22 separate local authorities, of which only 6 have populations of over 20,000. There are eight public transport undertakings and three major planning and highway authorities. The development of the new town, on the other hand, would be co-ordinated by a single agency on the basis of a twenty-year plan.

HOUSING

21.12 We have estimated that one effect of the new town might be to produce a net additional loss of population by migration from the subregion of between 10,000 and 15,000 by 1991, most of whom might come from the Blackburn Area. The remainder would come mostly from the Burnley Area as the effect on the Rossendale Area is likely to be small. For the Blackburn Area this reduction would amount to less than 5% of the population there would otherwise have been by 1991 so that the total effect on housing demand is not likely to be great.

21.13 The new town might however have more significance for the study area in the comparison of housing standards. By 1981 most housing in the new town over 100 years old will have been redeveloped while by 1991 it is probable that much inter-war and post-war housing will have been upgraded to reach current standards. In the study area, in contrast, the targets we have set if satisfactory housing conditions are to be enjoyed appear on present evidence difficult to achieve (see Paragraph 12.41). Many 19th century dwellings are still likely to be standing so that unless a major rehabilitation programme has been initiated the contrast of housing standards is likely to be acute, especially in Blackburn and Burnley County Boroughs which have the largest problems of renewal.

21.14 In compensation there is likely to be strong, continuing demand for the cheap accommodation the study area has to offer (see Paragraph 12.31). If communications between the Blackburn Area and the new town are sufficiently good many residents might be encouraged to travel to work in the new town who would otherwise have left the Area. Additional people coming from outside Central and North East Lancashire and finding jobs in the new town might choose to live in the Blackburn Area. They might be attracted either by the cheap accommodation in urban areas or at a different level by the very pleasant environment to be found in many of the villages in the Blackburn and Clitheroe Rural Districts. Opportunities for residents of the Burnley Area to travel directly to work in the new town are, however, likely to be less good, unless communications improve or there is a greater increase in economic activity than we have assumed.

21.15 It is unlikely that housing demand in the Rossendale Area will be markedly influenced by the new town in either size or location. In terms of housing standards the Area is also likely to compare better with the new town than the Blackburn or Burnley Areas. This is not only because of the probability that sub-standard dwellings will be largely cleared during the period (see Paragraph 12.40) but because of the distance of Rossendale from the new town and its relationship with the large towns lying in the south.

FACILITIES

21.16 It is expected that from about 1981 the new town will begin to be able m.support city scale facilities. Its population will still then be only three-quarters of that in North East Lancashire which is unlikely to have any such higher level facilities (see para. 12.13) with the possible exception of a civic theatre to be built as part of Blackburn's central area redevelopment. It will be in the 1980s therefore that people from the subregion and from the Blackburn Area in particular, will be likely to travel to, and depend upon, the new town for higher level facilities. This will be more convenient because at present people have to make more difficult journeys for such facilities to centres like Manchester. Especially in view of improved communications southwards (see para. 6.16) the Rossendale Area and to a lesser extent the Burnley Area are likely to retain their present relationship to the Manchester conurbation.

21.17 Higher level facilities in the new town will serve a wide area of Lancashire including the subregion and will therefore be likely to continue to increase in step with demand through the 1980s. However, upon present evidence, there is likely to be a contrast between the new town containing a population of half a million and able to support city-scale facilities and our study area containing a population of about the same size but unable to support such facilities because of its poorer communications and unco-ordinated administrative structure. We would like to think that if the right policy is pursued some progress may be achieved in the study area in beginning to right this imbalance before 1991.

21.18 The provision of facilities at the town and local levels in the subregion was described in detail in Section 12. Until about 1981 the standard of such facilities in the new town area is unlikely to be appreciably better than that for the subregion. However, after 1981 much of the physical fabric of the study area, dating from the late 19th Century will compare more and more unfavourably with that of the new town. Unless effort and resources are devoted to replacement or improvement the people of the Blackburn Area in particular may choose to use new town facilities at the lower levels in preference to local facilities. This situation would be likely to have more serious implications than the lack of higher level facilities.

TOWN CENTRES

21.19 By 1981 the road pattern and transport system of the new Leyland township centre is likely to be complete, the communications system to serve the growing central area of Preston well under way and the development of the enlarged centre of Chorley completed. The first township centre of the new town to be completed is likely to be in Leyland on a site at present undeveloped which offers opportunities for rapid development to contain a wide range of facilities and provide for a high level of vehicular and pedestrian access.

21.20 All these proposals will, however, take time in construction and for the new retail pattern to develop. If present redevelopment proposals are carried through Blackburn will continue to be the most attractive centre in Central or North East Lancashire for several years to come. Burnley will also exert a considerable draw although necessarily to a lesser extent. As Preston develops into a major retail centre, however, the impact will be felt upon Burnley and also to a greater extent upon Blackburn because of shorter distance and better communications. If these towns are to remain attractive centres the transportation problems resulting from increased vehicle usage have got to be fully evaluated and anticipated in a plan for the urban structure.

COMMUNICATIONS

21.21 There will be an integrated system of roads and land use within the new town. The chosen urban form that will provide an economic, efficient and flexible road system is the 'three strand structure'. This comprises two longitudinal high speed roads and a spine road for inter-township movements and secondary transverse routes for inter-district movements. This system permits a high level of internal mobility and also the use of express public transport on the spine route. Industrial sites in particular will have good links with the internal road system and also the regional and national motorway network. By 1981 major re-planning and roadworks in Preston and in urban communities south of the Ribble will have been completed.

21.22 By 1981 North East and Central Lancashire will have good inter-connections via A674 and A59/A677 which will also connect M6 and M61. The Burnley Area and the Rossendale towns will be connected to M62 via A56. Improvements to A59 will benefit Clitheroe and Whalley and also provide a better but still indirect connection from Burnley to M6. These proposals, however, will not make the road system of the subregion comparable with the 'three strand structure' of the new town. In particular there are at present no proposals to provide adequate road connections between Blackburn and Burnley and to serve the area between them which contains the best potential sites for industrial development.

21.23 On the evidence of present trends road improvements in North East Lancashire will be insufficient for present average speeds to be maintained as car ownership increases. Table 6.1 shows that the average speeds of journeys to M6 from most towns in the study area are in the range 20 to 25 mph and that at peak hours journey times can be as much as doubled. Over the coming years it is likely that average speeds will continue to drop and that journey times will lengthen. In the new town in contrast the road system is being designed for speeds of 45 mph on the high-speed roads and 25 mph on the low-speed roads.

21.24 The study area might also compare badly with the new town in public transport facilities. A spine railway route serves the urban communities from Blackburn to Colne and connects to the national railway network at Preston and Skipton. While the potential exists for the provision of a comparable service with that proposed for the express public transport route in the new town existing services do not measure overall town structure and the communications network.

POSSIBILITIES

21.34 The restructuring required to bring the urban areas of the subregion to a standard comparable with that for the new town will necessitate major efforts in design, planning and implementation. The first priorities are the establishment of the transportation network and the removal of cross traffic and obsolescent industrial premises from town centres and residential areas. Decisions on the rehabilitation or renewal of substandard housing will depend upon the resources available and the size and price of accommodation which people demand. A further requirement is the provision of open space both to a small scale in residential areas and to a larger scale adjacent to central areas. Many town centres have great natural potential for improvement and with adequate roads and parking spaces could become most attractive. During the time available for this study it has not proved possible to develop these proposals further, although in Paragraph 12.42 we suggested that if the present Town and Country Planning Bill were enacted in 1968 a more suitable basis of approach might be provided than is presently available.

21.35 One conclusion of our studies is that the subregion, unlike Central Lancashire, cannot provide for any great increase in population. It has, however, great potential for the provision of satisfactory living conditions for a population of about the present size by starting from the basis of development on which so much endeavour was expended in the 19th Century. The towns of the subregion form groups which we distinguished in Paragraph 6.2. The future roles of Clitheroe and of the Rossendale towns will be different from those of the town in the central urban belt: while Clitheroe will remain a marketing and residential town Rossendale may come increasingly within the sphere of influence of the Manchester conurbation. The towns of the central belt may fall into the pattern of 'beads' on the 'string' of the spine railway and thus come to function as an integrated unit in themselves, in relation to the new town and to the 'Development Zone' (Paragraph 21.32). The different towns of the belt will have different functions in accordance with the pattern of the distribution of facilities. While Colne and Darwen might have principally residential functions Burnley might serve as the centre of the eastern part of the belt, Blackburn might become an increasingly important centre for social and commercial facilities and major employment might be concentrated on the sites between Blackburn and Burnley.

IMPLEMENTATION

21.36 We have seen that there are many very small units in the present administrative structure of the subregion. There is, however, no reason why independent units should not work together to formulate a joint policy in anticipation of the reforms of local government now under consideration. One of the most encouraging signs for the future of the subregion is that a Committee has already been set up to help the co-ordination of effort and the appointment of an Industrial Development Officer is proposed. Similarly bus services in the Burnley Area are provided by a Joint Transport Board and the opportunity exists for the major transport undertakings fully to integrate their services. We strongly recommend that such policies be taken further and that a joint body should consider the priorities for development and the allocation of resources unhampered by the restrictions of present local government boundaries.

Colne: The Town Hall.

Section Twenty Two

The future with the new town

22.1 In Part Three we examined the present condition of the study area and considered what its future might be without the new town. Our broad findings, summarised in Section 14, were that after a prolonged and severe period of decline the area is making strenuous efforts to adapt itself to changed circumstances. It is possible that the population decline which has continued for over half a century will be halted and that the population will begin to increase slightly in the coming years. The centre of gravity of the study area will continue to shift in the direction of Blackburn and it is in the west that most growth is likely to take place. Major efforts are being made to improve the study area as a place to live in; but because of the magnitude of the problem of rehabilitation and renewal, a great deal still remains to be done.

22.2 In Part Four we described the new town proposal and outlined the likely pattern of growth. Most development in the early years is likely to consist of the expansion of existing communities south of the Ribble. Later there will be more emphasis on development north of the Ribble. By reason of its geography, its location astride national road and rail routes and the size of its population, Central Lancashire is well favoured for economic growth. It is intended that the scale and location of industrial development should initiate further growth both in the new town and in nearby areas.

22.3 At present the two areas are quite different in character. The study area is slowly recovering from a long period of serious decline. Central Lancashire, in a more favourable location, has better prospects for sustained growth of population and employment.

22.4 Bearing in mind that attention will first be paid to the areas south of the Ribble in the new town development and that the intake of population will be faster in the second decade of growth, we consider that the effect on North East Lancashire will be more pronounced in the later stages of development. It will probably not be until after 1981 when the area begins to function as a city with an integrated land use and transportation structure that the critical period of comparison between what Central and North East Lancashire can offer will begin.

22.5 We have already shown (Section 11) that North East Lancashire is likely without the new town to lose well over half its natural increase by emigration (i.e. about 30,000 people), and perhaps reach a population of around 500,000 by 1991. We also made the point that any variations in this forecast are more likely to be downwards than upwards, and that on rather more pessimistic assumptions, its population would by that date be similar to the present size of around 470,000. The new town will affect the situation by influencing migration in four main ways. First, it will attract migrants directly. Secondly, it will divert to itself people who would in any case have left North East Lancashire, but otherwise would have gone elsewhere. Thirdly, the increased job opportunities it will provide will partly be met by people travelling daily to work, and therefore some who would otherwise have left North East Lancashire will continue to reside there. Fourthly, as we explain later, it will create more jobs within the study area through the development of industries complementary to those in the new town.

22.6 Our overall best estimate of the additional migration movement as a result of the new town is a figure of the order of 10,000 to 15,000 over the twenty year period to 1991; that is to say, if the estimate of total population in the subregion at that date of 500,000 without the new town is correct, it would be of the order of 485,000 to 490,000 with the new town. This outflow is made up of a total additional 'pull' by the new town of around 20,000, less a considerable 'diversion effect' on those who would otherwise have left the subregion for other destinations. The estimate also assumes that conditions will allow for a much increased daily flow by travel to work of the order of several thousand people.

22.7 The three Areas of the subregion will be differently affected. The Blackburn Area, which is expected to have the lion's share of the population increase in any case, will be most affected, but it will still (on the assumptions above) increase its population by up to 16,000 people. The Burnley Area, whose population is expected to increase by only a very small margin without the new town, is estimated to remain roughly static in population with the new town. The Rossendale Area's population is expected in any case to decline sharply, and its position is only slightly affected by the new town, but because of its location it is much more affected by its linkages with towns to the south. There are indications that the improvement of these linkages is giving Rossendale the opportunity of becoming an increasingly attractive place in which to live. Not only is there scope for new residential development but there are also opportunities for the imaginative redevelopment of existing areas, whether they be industrial, commercial or residential, with housing in a wide range of types.

22.8 The likely effects of the new town development on the prospects for the manufacturing industry in the study area are difficult to estimate with any precision. The main industries from which further growth is expected, the metalworking industries, will benefit from the development of similar industry in the new town in two ways. First, by the sales of goods and services to firms in the new town. Secondly, by the use of the auxiliary services and facilities essential to the development of industry which the larger industrial grouping will make possible. We have seen that the move into more diversified forms of engineering appears to be a precondition of further growth in North East Lancashire. This process could be aided considerably by proximity to a growing industrial complex. From this point of view therefore the new town will give opportunities to firms in the study area which are in the expanding industries which they would not otherwise have.

22.9 The great majority of the industry which goes to the new town would not, in any case, have gone to the study area. Indeed, the growth of industry in the new town may have some beneficial effects on the study area's attractiveness fot industry. Incoming firms to the new town may, after a time, open branch plants in North East Lancashire and as expansion proceeds, the study area's advantages of inexpensive industrial property, plus proximity to the growing town and the availability of certain types of labour may induce some firms to locate there.

22.10 However, the growth of engineering industry in Central Lancashire may attract considerable numbers of workers from the study area. The effect will probably be relatively slight on the large engineering concerns, but may take people from the smaller firms. In addition, the employment opportunities of the new town will probably prove attractive to workers in a wide range of other industries, particularly those paying below-average wages. This therefore makes retraining an even more urgent problem in view of the change in the composition of skills and the increasing demand for skilled workers which we expect to occur in any case.

22.11 The new town with its eventual total population of 500,000 will be able to support a much larger range of service activities than is to be found at present either in North East or Central Lancashire. In consequence, a slower rate of growth will take place in job opportunities in the service sector of North East Lancashire. The effects of this have been taken into account in the population figures of Paragraph 22.6 above.

22.12 The current major central area redevelopment programmes in the study area will not be endangered by the new town. The slight reductions of anticipated growth which will occur will be largely offset by the benefits that study area residents will derive from proximity to a much larger commercial centre. The completion of the new shopping and office developments should make both Blackburn and Burnley attractive centres for many years to come.

22.13 The impact of the new town will be strongly conditioned by the future pattern of communications, both between Central and North East Lancashire and those internal to each. Present road proposals for the study area do not include a direct route to the M6 linking up the major towns and running the whole length of the Calder Valley. However, such a route could have implications for journey to work, migration and industrial development. With much improved access for journey to work, fewer people will be likely to emigrate because of insufficient job opportunities either in number or range. Also, the kinds of industrial development closely linked with industry in the new town are influenced by the time distance factor, and better communications will bring them 'nearer' to the industrial complex.

22.14 The development of the new town will slowly gather momentum during the 1970's so that by the 1980's it should be in a position to support major city functions and will have established a greatly improved standard of environment. In these circumstances the extent and nature of the impact of the new town on North East Lancashire will depend in part on changes which have occurred by then within the latter. The subregion will be in a position to derive more benefit from the new town development if, within the time available, more resources are made available for the improvement of living conditions. It will be essential to maintain a balance between rehabilitation and rebuilding, particularly in the large 19th Century residential areas around the town centres, and to abolish atmospheric pollution. The 'spread' of benefit will, however, be limited if the programmes for urban renewal and industrial retraining continue at their present rates and plans for the improvement of internal and external communications stay as they are. If the necessary changes can be initiated in the decade which is available before the 1980's, there is every reason to believe that there will be a reduction in the numbers of people leaving North East Lancashire for other parts of the country.

22.15 We have found it difficult to put values to the many elements which make up the total impact of the new town on the study area. We have run into a familiar problem. It is much easier to measure costs than to measure benefits. It therefore follows that our estimate of the loss of people under the impact of the new town cannot in the present state of knowledge, be matched with similarly convincing measurements of the benefits which could be derived from effective programmes for the improvement of communication, industrial retraining and the revival of living conditions. Our overall assessment is that the coming of the new town will stimulate those forms of activity in the study area which are in the growth sectors of industry; whereas it may add to the difficulties of the sectors which would in any case be expected to decline. In other words, it will accelerate the rate of change and this will enable North East Lancashire to adapt itself in order to participate more fully in a changing world.

Sabden village. Good village character in a pleasant wooded valley.

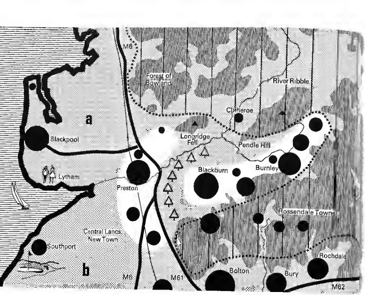
Section Twenty Three

The wider aspects

23.1 If we consider Central and North East Lancashire together, the recent past has shown a general tendency for a movement in population, employment and prosperity towards the towns of the coastal plain. Looking forward to 1981 and 1991 we expect this tendency to continue; Preston, by reason of its situation and communications, even without the new town will become the dominant service centre for the whole of Northern Lancashire. Blackburn will grow as a service centre to a greater degree than Burnley, reflecting the relatively favourable outlook for the western as opposed to the eastern parts of North East Lancashire. Central Lancashire, in contrast to much of North East Lancashire, will probably experience some net in-movement of people in the future, even without the new town.

23.2 Taking both areas together, without the new town, it is unlikely that the rate of growth in total population would reach that of the region or England and Wales in the period to 1981 or thereafter, largely as a result of a continuing loss of population through migration. We have already sufficiently stressed that our assumptions for emigration from North East Lancashire are reasonably optimistic ones. Indeed, for certain parts of the area a declining, or at best a static, population would be the most likely outcome.

23.3 When we consider the same area with the new town, quite naturally the rate of increase in total population will be considerably greater than that of the region. But this is not the only result. New development will not only provide more jobs and people and facilities at present obtainable only in the region's conurbations, it will give a new kind of impetus for the economic development of Central and North East Lancashire and it will provide local opportunities for people who would otherwise leave the area. Also, by concentrating development where the opportunities are most favourable, a strong enough build-up can be attained to spark off a process of self-sustained growth. It is essential, when this occurs, that sufficient scope for long term development should exist, and this is certainly the case in Central Lancashire. If the same total effort as that involved in developing the new town were expended



London-Glasgow Railway	—
Motorways	━
Existing Urban Areas	●
Major Urban Groupings	▨
Land over 600'	▥
Recreational Facilities	
Beaches	👫
Championship Golf Course	⛳
Sailing	⛵
High Quality Agricultural Land	
The Fylde	**a**
Ormskirk Plain	**b**
Area of High Landscape Value and Recreational Potential	⬚
Area of Potentially Good Landscape Character and Amenity	△

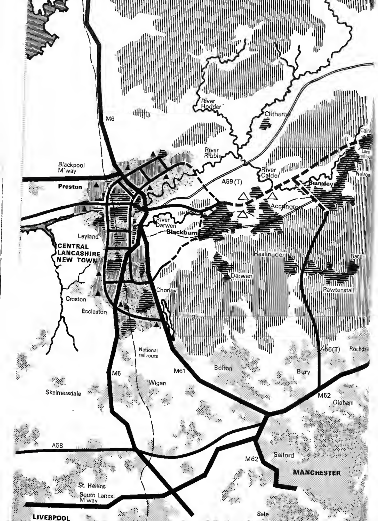
23.1 NORTH EAST LANCASHIRE IN RELATION TO CENTRAL LANCASHIRE AND THE COASTAL AREAS in trying to spread the growth of industry and population over the whole area, much of the powerful attraction to people and firms, essential to the achievement of a breakthrough, would be lost.

23.4 An attempt to induce large scale industrial development throughout North East Lancashire might not in fact produce the intended effect of holding the area's population, since our surveys of migration show that the desire for better living conditions is a major cause of outward migration. In any case the geography, communications and existing urban form of the subregion rule out the massive and concentrated injection of new population and industry such as would provide the basis for a major growth pole. The new town development should not constitute a diversion of economic activity from North East Lancashire; rather it should make for a net addition to investment in the wider area which would be justified by the new population it would bring in and provide for.

23.5 We were not asked to prepare a detailed physical and economic plan for North East Lancashire, nor indeed would this have been possible in the time available. It seems sensible, however, as a result of what we have learned about the area, and the likely impact of the new town upon it, to set out the implications of our study insofar as they bear upon a planning strategy for North East Lancashire in the future. This, as we see it, should form part of a wider strategy embracing the whole of the area from Colne in North East Lancashire to the seaside towns of the Fylde; it could all be regarded as a single "development zone" with the new town at its centre acting as the principal engine of growth (Fig. 23.1)

23.6 The main elements in the strategy for North East Lancashire would then be :-

a) A fast, direct route linking the major towns of the Calder Valley to M6 and the new town area. This would have the effect of stimulating a variety of journey to work movements by widening the range of job opportunities at various points between the north-east of the study area and the Central Lancashire New Town. The towns further up the valley should benefit from the opportunities open to their residents which this 'cascade' of movement to the west would produce. It would also render the whole area more accessible, increasing the willingness of industrialists to develop appropriate units in the subregion, and to take advantage of the industrial facilities the area has to offer. (Fig. 23.2).


River Hodder
Clitheroe
M6
River Ribble
Coln
Local rail rou
Blackpool M'way
River Calder
Nelson
Preston
A59 (T)
Burnley
Accrington
River Darwen
Blackburn
Leyland
CENTRAL LANCASHIRE NEW TOWN
Haslingden
Bacu
Darwen
Rawtenstall
Chorley
Croston
Eccleston
National rail route
A56(T)
Rochdal
M6
M61
Bolton
Bury
Wigan
Skelmersdale
M62
Oldham
A58
M62
Salford
MANCHESTER
St. Helens
South Lancs M'way
LIVERPOOL
Sale

b) Comprehensive rehabilitation and renewal of the urban fabric, especially in some of the towns. This would cover a variety of fields including housing, industrial clearance, parks and other urban open spaces. It would follow that this process should be encouraged and supported by appropriate forms of government assistance. Apart from fulfilling an urgent present need, this would make the towns concerned more attractive places in which to live with important effects on migration and daily journey to work.

c) The setting aside of the areas capable of industrial development to ensure their future availability. It is likely that the new town development would constitute an important additional inducement for certain types of firms to locate and expand in North East Lancashire.

d) The establishment of industrial training facilities on a much larger scale than at present. This is in any case an essential requirement in view of the anticipated changes in the industrial structure of the study area. It would, taken in combination with the points mentioned above, ensure that the area possessed sufficient skilled workers to take advantage of the wider job opportunities which the influence of the new town would create. Their presence would also make the subregion more attractive to firms seeking proximity to the new industrial complex.

23.7 The strategy implied involves a rethinking of the future of many parts of the "development zone". In particular, it means a recognition of the fact that not all of its areas have equal potential for major economic growth. Within North East Lancashire, for example, the more isolated towns cannot hope to see further industrial development on any scale. The strategy also implies a change in thinking about forms of assistance appropriate to areas of this kind. The primary need of North East Lancashire is assistance with communications and the task of rehabilitation and renewal, rather than industrial incentives.

23.2 A FUTURE STRATEGY FOR NORTH EAST AND CENTRAL LANCASHIRE

Motorways	▬
Dual Carriageway routes by 1981	━
Possible dual carriageway routes	■ ■ ■
Improved trunk roads by 1981	═
Land over 600' 0"	▥
New town : residential areas	▥
industrial areas	▲
open space	⁘
New town and study area existing urban areas	▤
Other existing urban areas	▒
Major potential sites for industrial development in North East Lancashire	△

Victorian buildings in Clitheroe

Appendices

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Appendix A

Method of approach to study

A.1 Our terms of reference directed us to evaluate the effects of the development stage of the new town on the North East Lancashire subregion. To do this we had to know two things. First, the new town designation proposal and its likely growth pattern for the plan period 1971-1991; and secondly what would be the future of North East Lancashire over this same period. The study was therefore not a conventional survey, analysis, plan sequence of operations but one where, by comparing two situations, we could gauge the effects of the one on the other. While it is a simple matter to state what we had to do, in practice, we found that in an area the size and complexity of North East Lancashire and administered by no less than 22 local authorities, it was essential to prepare a clear sequence of working operations towards clearly defined targets. Perhaps the greatest danger always present in this type of study is that of knowing when to stop the information collecting stage of the work. The background and social history of North East Lancashire for example was a fascinating part of our research and one on which it would have been easy to dwell too long upon.

A.2 We adopted an overlapping six part sequence of operations as follows :-

Stage 1 A rapid assessment of -
- a) the study area's history and present environment
- b) the present social and economic basis of the subregion
- c) the character, location and interactions of the primary activities within the urban areas

(1½ months + 1 month overlap to Stage 2)

2 An appreciation of the dominant character, problems, needs and opportunities inherent in the area
(1 month + 1 month overlap)

3 Comparative growth/decline analysis and projection of the future of the study area over the period 1968-1991
(1½ months + 1 month overlap)

4 A study of the likely programme of growth

of the new town over the same period
(Overlaps with Stage 3)

5 Assessment of the effect of the new town on the study area stage by stage in its projected growth
(1 month)

6 Conclusions and consideration of the new town in its wider context
(1 month)

The overlap process accounts for the time given to each stage being greater than the total six month study period. In the event we found the complexity and scope of the work too much for such a tight programme and we required an extra month in which to complete and write up the study.

A.3 The work we had done in Central Lancashire on the new town designation together with the Department of Economic Affairs industrial complex study gave us, as it were a head start in this study. The only special survey required by our terms of reference was a sample enquiry of industrial establishments.

A.4 The list of headings we prepared as a framework for the collection and synthesis of information is set out in Table A.1. We accepted that this list might change as we became more aware of the job set us and that it might not be possible to obtain adequate information under all the sub-headings. We allowed the first two months of the programme to collect and assess this material.

A.5 The importance of migration in assessing future levels of population soon became apparent. Equally so was the lack of available information on past

TABLE A.1

LIST OF SUBJECT HEADINGS

1. PHYSICAL CHARACTER
1 Topography
2 Climatic conditions
3 Landscape
4 Mineral deposits
5 Infrastructure/Surface geology

II. URBAN STRUCTURE
6 Development form of urban areas
Intensity of development
7 Communications pattern
8 Development potential
9 Trends of decay and obsolescence
Urban renewal performance

III. POPULATION
10 Size and distribution
11 Age/sex/structure
12 Socio-economic characteristics
13 Mortality/fertility rates
14 Migration
15 Working population

IV. LIVING CONDITIONS
16 Density/residential development and Form/residential development
17 Occupancy characteristics
18 Family economics/Housing costs
19 Car ownerships
20 Public transport
21 Air pollution
22 Provision/location of facilities
23 Recreational opportunity
24 Educational opportunity

V. INDUSTRY AND EMPLOYMENT
25 Productivity
26 Expansion/contraction trends
27 Capacity to attract industry
28 Female labour utilisation
29 Labour resources
30 Labour skills
31 Unemployment levels
32 Wage levels
33 Industrial structure

VI TOWN CENTRES
34 Range of facilities
35 Accessibility
36 Expansion potential
37 Catchment/Turnover
38 Urban character
39 Redevelopment index

VII FINANCIAL RESOURCES
40 Public expenditure record
41 Private investment record
42 Social capital resource
43 Private finance availability

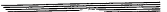
VIII POLICY AND PROPOSALS
44 Significant economic policies in operation
45 Significant economic policies proposed
46 Significant planning policies in operation
47 Significant planning policies proposed
48 Significant transport policies in operation
49 Significant transport policies proposed
50 Significant administrative policies in operation
51 Significant administrative policies proposed
52 Proposals listed separately to headings

trends or reasons for leaving North East Lancashire. We therefore made a special survey of families who had left the study area over the last few years. We hope that the findings of this survey will be of particular interest in the understanding of the problems of 'grey' areas.

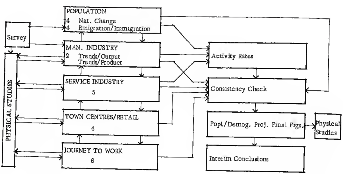
A.6 When we analysed the basic information we found it necessary to make some qualifying statements about the nature of the study area and the limitations it implied in the scope of the study. Clitheroe, in the Ribble valley, is separate from the remainder of the study area in many respects and of a totally different character. Consequently we did not examine Clitheroe in the same detail as the remainder of the study area. Withnell U.D. was considered only to establish its relationship to the subregion and not as part of it. We felt that the Rossendale towns, to a large extent geographically self-contained, were also open to the influences of the towns to the south as well as those to the north and north-west, but it was not within our terms of reference to examine the nature of these wider influences (see Figure A.1). We therefore concentrated much of our work on the main 'Calder Valley' towns from Blackburn to Trawden.

A.7 Because of the lack of available information we were unable to investigate fully all the headings listed in Table A.1. We found, for example, that insufficient information is available at subregional level on Financial Resources in both the public and private sector. The Ministry of Labour quarterly publication 'Statistics on Incomes, Prices, Employment and Production' deals only with statistics at national and regional levels. We are satisfied however that in the time available we were able to cover an adequate range of aspects in sufficient depth to enable us to formulate conclusions.

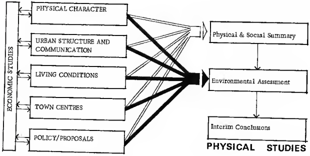
A.8 Figures A.2 and A.3 illustrate the analytical method we used for the physical and economic planning aspects of the study and the way in which we synthesized the broad bands of basic information. We had to achieve this degree of integration in order to obtain the composite end pictures which represented the scope, interaction and relative importance of the factors set out in Table A.1. Figure A.4 describes the integration of the two processes. The first complete run-through of this procedure, using information assembled as described, gave us the total picture of the future of North East Lancashire without the new town. Using the relevant material from this operation and information about the new town, a second run-through produced the picture of the future of the area with the new town. From the isolation of the differences between the two situations we were able to start to measure impact.



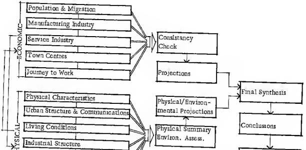
LEVELS OF INTERACTION **A.1**



ECONOMIC STUDIES A.2



PHYSICAL STUDIES A.3



OVERALL PROCESS A.4

Note: Headings of work derive from Table A.1

Appendix B

Population forecast and migration survey

POPULATION FORECASTS

B.1 A Basic Model for the 'static' projection of a given population was used to produce the population forecasts described in Section 7. The broad outline of the model in algebraic terms is as follows:-

where

$${}^{n}P_{x/x+4} = {}^{n-5}P_{x-5/x-1}\left[1-{}^{n-5}Q_{x-5/x-1}\right]$$

= the number of persons at mid-year n aged x to x + 4 last birthday

and

${}^{n-5}Q_{x-5/x-1}$ = the probability of death between n-5 and n for persons aged x-5/x-1 last birthday at mid year n-5

At age O - 4 the formula used is

$${}^{n}P_{o/4} = {}^{n}B\left[1-{}^{n-5}Q_{0}\right]$$

where

${}^{n}B$ = the number of live births in the period mid-year n-5 to mid-year n

and

${}^{n-5}Q_{o}$ = the percentage of babies born live in the period mid-year n-5 to mid-year n who die before the end of that period.

B.2 Inputs were made to the Model in order to calculate the number of survivors:-

i.e. ${}^{n}P_{x/x+4} = {}^{n-5}P_{x-5/x-1}\left[1-{}^{n-5}Q_{x-5/x-1}\right]$

(a) Starting date for the projection (=Ts) and finishing date (=Tf)

(b) Age/sex structure of the population at the starting date by five year age groups

i.e. ${}^{m}P_{xi/xi+4}$ = 0, 5, 10, 15 .... 100+

and ${}^{f}P_{xi/xi+4}$ = 0, 5, 10, 15 .... 100+

where ${}^{m}P_{x/x+4}$ = the male population in the age group

${}^{f}P_{x/x+4}$ = the female population in the age group

(c) Survival Factors: these are given by quinquennia - e.g. for a projection from 1961 to 1981 we would have four quinquennial survival factors for each age/sex group at 1971.

If ${}^{n-5}Q_{x-5/x-1}$ = the probability of death in the period n-5 to n for a person aged x-5 to x-1 last birthday at mid-year n-5

then $1-({}^{n-5}Q_{x-5/x-1})$ = the probability of survival for that person in that period

This probability is calculated for each age/sex group for each quinquennium of projection, and applied to the age/sex groups at the starting date to give estimates of the population surviving at given future dates.

B.3 Further inputs were made for the calculation of future births (B):-

(a) From 1(b) above, the number of women in five year age groups aged 0-69 at T

i.e. ${}^{f}P_{xi/xi+4}$; xi = 0, 5, 10, 15 65

(b) Marriage Factors: these are expressed as the

number of marriages in years
ni+(15 to 19); ni+(20 to 24);..............
ni+(45 to 49) per 10,000 female births in
years ni to ni+4 where ni = years 1891, 1896,
1901, 1906 1986
where Ts = 1961 and Tf = 1991

(c) Fertility Factors: these are expressed as the number of births in years yi+(0 to 4),
yi+(5 to 9), yi+(10 to 14) ....
yi+(25 to 29) per 1,000 marriages in years
yi+(0-4); yi = 1938, 1941, 1946, 1951 ... 1986
where Ts = 1961 and Tf = 1991

(d) Illegitimacy Rates: expressed as a percentage of legitimate births in years yi to yi+4;
yi = 1961, 1966 etc. for Ts = 1961

(e) Backward Survival Factors: these are necessary, because the marriage factors in 2(b) above relate to female births at a given date. Thus the probability that of 100 women aged 25 - 29 at T, x were married say in the period Ts - 15 to Ts - 10 is given by PmPb, where Pm is the probability of marriage in T - 15 to T-10 for a woman born in Ts-(25 to 29) and Pb is the probable number of female births in Ts - (25 to 29) which would have resulted (after allowing for deaths between the time of birth and Ts)in the survival of 100 women aged 25 - 29 at Ts_o.

B.4 SURVEY OF EMIGRANTS

The survey of emigrants to which reference is made in Section 7 was based on a postal survey of 3,350 migrant households leaving the study area in the two years from July 1965 to June 1967. This was a complete sample of all such households identified from the sampling frame used (not named for reasons of confidentiality). From comparison with other sources we calculate that the sampling frame accounted for some two-thirds of all migrants, and that this proportion was unlikely to vary significantly between local authorities, or between migrants moving within the study area and to destinations outside it. We would therefore expect that our analyses of the pattern of moves within and from the study area, based on this sampling frame, to accurately reflect the total pattern of moves. The sample did slightly under-represent young migrants aged between 18 and 24, and due allowance has been made in calculations of forecasts involving the age-structure of migrants. However, all figures quoted in the report refer to the 'raw' unweighted results of the survey.

B.5 Of the total 3,350 questionnaires sent out,

TABLE B.1

SURVEY OF EMIGRATION : RESPONSE RATE

	QUESTIONNAIRES	%
Total no. sent out	3,350	100
Replied to first questionnaire	1,281	38
Replied to reminder questionnaire	308	9
	1,589	47
Insufficient information on questionnaire	149	4
Total Net Response	1,440	43
Moved again since leaving study area	384	11
Moved before or after sample period	199	6
Blank/spoiled questionnaires	174	5
Deceased	72	2
Total Crude Response	2,418	72

2,432 or 73% were received back, but a large proportion of this 'crude' response were not included for analysis. Those excluded were -

(a) Questionnaires sent to people who had moved again subsequent to their move from the study area. Most of these were returned unopened by the G.P.O., but we also excluded those questionnaires which had been sent on by the current residents or the G.P.O. and completed. This was a haphazard process and there was an additional problem in that these migrants might have completed the questionnaire in respect of their last move.

(b) Questionnaires returned on behalf of people deceased since the time of moving.

(c) Questionnaires returned blank or with insufficient classification information.

(d) Questionnaires returned by people who had moved either before or after the sample period, due to errors in the sampling frame in individual cases. This was applied rigorously and may have included some people with merely a gap between the time of moving and the time of taking up residence at their new address.

B.6 An analysis of the response rate is shown in Table B.1 The overall response rate was very satisfactory for a postal survey, and the nature of the replies, often giving much valuable additional information not requested in the questionnaires, made it clear that migrants were glad to co-operate in a survey of a subject which was of considerable personal interest to them. The substantial 'wastage' due to subsequent moves or deaths was inevitable due to the long sampling period used, which meant that in the extreme case, migrants had moved from the study area over two years before the time of the survey.

B.7 Table B.2 shows the net response rate for individual local authority areas. With the exception of some areas where a relatively small number of questionnaires were sent out, the response was fairly uniform throughout the study area. The results of the survey included in the text of the report represent only the most important points to emerge from a very substantial body of analysis. For reasons of space we have not included the full text of all tables produced, but for reference purposes we reprint at the end of this Appendix a copy of the questionnaire, together with a list of the standard analysis break-

TABLE B.2

SURVEY OF EMIGRANTS : NET RESPONSE RATES

LOCAL AUTHORITY	TOTAL QUESTIONNAIRES SENT OUT	NET RESPONSE %
BLACKBURN		
Accrington M.B.	244	32
Blackburn C.B.	643	42
Blackburn R.D.	123	44
Church U.D.	33	33
Clayton-le-Moors U.D.	37	41
Clitheroe M.B.	125	38
Clitheroe R.D.	114	45
Darwen M.B.	176	39
Great Harwood U.D.	68	46
Oswaldtwistle U.D.	78	63
Rishton U.D.	33	58
Total:	1,674	42
BURNLEY		
Barrowford U.D.	31	35
Brierfield U.D.	66	47
Burnley C.B.	409	47
Burnley R.D.	144	52
Colne M.B.	146	35
Nelson M.B.	260	48
Padiham U.D.	74	36
Trawden U.D.	14	79
Total:	1,144	46
ROSSENDALE		
Bacup M.B.	219	42
Haslingden M.B.	132	34
Rawtenstall M.B.	181	48
Total	532	42
TOTAL STUDY AREA	3,350	43

s

down of answers which were applied to the answers to all questions.

B.8 Total answers to all questions were broken down separately by each of the following classification groupings.

	CLASSIFICATION	BREAKDOWN
1.	Age	15-19 years 20-24 " 25-30 " 31-44 " 45-54 " 55-59 " 60 " or more N. A. (Not Answered)
2.	Marital Status	Single Males Single Females Married with child(ren)* Married without child(ren)* Widowed/Divorced N. A.
3.	Distance i.e. Distance moved from former address to present address	0-10 miles 11-30 " 31-100 " 101 " or more N. A.
4.	Social Class	I Professional etc. II Intermediate IIINm. Non-Manual skilled III M. Manual skilled IVNm. Non-Manual Partly skilled IV M. Manual Partly skilled V Unskilled Retired Students Other Economically Inactive N. A.
5.	Area A (Sub-Divisions)	Blackburn Burnley Rossendale
6.	Area B (Local Authorities)	The 22 individual local authorities within the study area.

* With or without child in the household at time of move.

All the classification groupings listed above refer to the head of the migrant household.

THE EFFECT OF DISTANCE ON MIGRATION

B.9 We outlined briefly in Section 7 the method used to isolate the effect of distance per se on the volume of migration, an analysis summarised in Figure 7.4 Based on all household movements in the period July 1965 to June 1967 recorded on the sampling frame used for the postal survey, this showed the effect of distance on the volume of movement, for moves within and from the study area combined.

B.10 For each migration flow, both between individual local authorities within the study area, and to outside destinations, we computed a value for $\frac{\text{number of migrants}}{\text{population of destination}}$ which we have called the 'Distance Value'. Population size was taken as the best overall indication of the 'quantitative' attraction of destinations, as opposed to their 'qualitative' attraction. The varying qualitative attraction of different destinations was of course reflected in the actual migration flows but this was overcome to a considerable extent by grouping destinations into mileage categories. However it was also necessary to exclude from the analysis those flows to destinations with an exceptionally high qualitative attraction value, such as the seaside towns of the Fylde coast which accounted for a high proportion of total migration in certain distance categories, and would therefore have distorted the pattern for flows to more typical destinations.

B.11 From our detailed examination of the distance values for movement between local authorities within the study area and from the various local authorities to destinations outside it, it is clear that the relative effect of distance is essentially similar for both, although the absolute distance values are of course different. In both figures the greatest departures from the overall curve are at the upper end of the distance scale and this is probably a reflection of the smaller number of individual migration flows on which these distance values are based. Each individual flow will reflect the varying qualitative attractions of specific destinations, and while at short distances the large number of individual observations tend to cancel out these variations, at longer distances the influences of specific flows on the total distance value for that mileage category is considerably greater.

THE PATTERN OF MOVEMENT WITHIN NORTH-EAST LANCASHIRE

B.12 Tables B.3 and B.4 show the gross and net

TABLE 8.3

HOUSEHOLD MOVEMENTS WITHIN STUDY AREA JULY 1965 - JUNE 1967

MOVED FROM: / MOVED TO:	ACCRINGTON M.B.	BLACKBURN C.B.	BLACKBURN R.D.	CHURCH U.D.	CLAYTON-LE-MOORS U.D.	CLITHEROE M.B.	CLITHEROE R.D.	DARWEN M.B.	GREAT HARWOOD U.D.	OSWALDTWISTLE U.D.	RISHTON U.D.	BARROWFORD U.D.	BRIERFIELD U.D.	BURNLEY C.B.	BURNLEY R.D.	COLNE M.B.	NELSON M.B.	PADIHAM U.D.	TRAWDEN U.D.	BACUP M.B.	HASLINGDEN M.B.	RAWTENSTALL M.B.	TOTAL MOVES
ACCRINGTON M.B.		72	16	83	40	2	13	8	29	101	13	1		38	11	2	2	6		6	20	4	465
BLACKBURN C.B.	64		210	4	9	19	17	114	35	70	67		5	29	21	1	6	5		2	11	4	693
BLACKBURN R.D.	17	90		2	3	4	13	13	12	7	11		3	5	3	3		4		1	3		194
CHURCH U.D.	77	14	6		10	3		1	5	36	2			5	1	1					2		163
CLAYTON-LE-MOORS U.D.	49	5	5	8		4	1	2	12	6	6		1	2	1	1					1		104
CLITHEROE M.B.	9	22	7		2		26	1	6		2	2	2	14	8		1	4			1		105
CLITHEROE R.D.	6	12	13		2	27		1	3	2	3	1		5	2	2	5	5					89
DARWEN M.B.	11	116	27	3	3	3			2	1	3		1	4	3		1			1	8		187
GREAT HARWOOD U.D.	19	31	13	8	10	5		3		2	12			3	4	1		1					110
OSWALDTWISTLE U.D.	76	43	10	14	7	2	1	7	10		2		1	3	3	1	2			2	5		189
RISHTON U.D.	9	24	4		4	1	1	4	14	2				3	2	1	1			1			71
BARROWFORD U.D.	2		2		1	1	2						13	8	9	18	51	1	2				108
BRIERFIELD U.D.	2	2			1	2						4		30	18	10	43	5	2			2	119
BURNLEY C.B.	26	24	9	1	6	8	11	3	1	6	7	14	48		153	24	82	61	2	9	3	3	499
BURNLEY R.D.	15	7	4		3	3	9		2		3	14	16	107		34	64	39	4	1	1		326
COLNE M.B.	1	5		1	1			2			1	9	9	26	24		70	3	11	4		1	168
NELSON M.B.	9	8	7		1	4	5	1	1	1		70	59	101	55	88		9	3	4	2	1	429
PADIHAM U.D.	10	11	5	1	1	5	5	1	2	2	2	1	5	65	25	1	11						153
TRAWDEN U.D.			1			1						1		1	5	28	6						43
BACUP M.B.	13	5	2			1	1	4	1	1	1	1	5	28	3	1	7	2			21	77	174
HASLINGDEN M.B.	47	14	3	3	2		1	8	1	7	4		1	11	2	4	2	2		12		37	161
RAWTENSTALL M.B.	17	9	2	1	1	3	2	2	2	1	1	1		28	2	2	3	3		51	56		187

TABLE 8.4

NET HOUSEHOLD MOVES WITHIN STUDY AREA JULY 1965 - JUNE 1967

MOVED FROM: MOVED TO:	ACCRINGTON M.B.	BLACKBURN C.B.	BLACKBURN R.D.	CHURCH U.D.	CLAYTON-LE-MOORS U.D.	CLITHEROE M.B.	CLITHEROE R.D.	DARWEN M.B.	GREAT HARWOOD U.D.	OSWALDTWISTLE U.D.	RISHTON U.D.	BARROWFORD U.D.	BRIERFIELD U.D.	BURNLEY C.B.	BURNLEY R.D.	COLNE M.B.	NELSON M.B.	PADIHAM U.D.	TRAWDEN U.D.	BACUP M.B.	HASLINGDEN M.B.	RAWTENSTALL M.B.	NET TOTAL
ACCRINGTON M.B.		-8	1	-6	9	7	-7	5	-10	-25	-4	1	2	-12	4	-1	7	4		7	27	13	14
BLACKBURN C.B.	8		-120	10	-4	3	-5	2	-4	-27	-43		-3	-5	-14	4	2	6		3	3	5	-179
BLACKBURN R.D.	-1	120		4	2	3		14	1	3	-7	2	-3	4	1	-3	7	1	1	1		2	152
CHURCH U.D.	6	-10	-4		-2	-3		2	1	-22	-2			-4	-1			1			1	1	-36
CLAYTON-LE-MOORS U.D.	-9	4	-2	2		-2	1	1	-2	1	-2	1		4	2		1	1			1	1	3
CLITHEROE M.B.	-7	-3	-3	3	2		1	2	-1	2	-1	-1		-6	-3		3	1		1	-1	3	-8
CLITHEROE R.D.	7	5			-1	-1		-1	-3	-1	-2	1		6	7	-2			1	1	1	2	20
DARWEN MB.	-5	-2	-14	-2	-1	-2	1		1	6	1		-1	-1	-3	2		1		3		2	-14
GREAT HARWOOD U.D.	10	4	-1	-1	2	1	3	-1		8	2			-2	-2	-1	1	1		1	1	2	28
OSWALDTWISTLE U.D.	25	27	-3	22	-1	-2	1	-6	-8				-1	3	-3	-1	-1	2		-1	2	1	56
RISHTON U.D.	4	43	7	2	2	1	2	-1	-2					4	1		-1	2			4	1	69
BARROWFORD U.D.	-1		-2		-1	1	-1						-9	8	5	-9	19		-1	1		1	11
BRIERFIELD U.D.	-2	3	3					1		1		9		16		-1	18		-2	5	1	-2	48
BURNLEY C.B.	12	5	-4	4	-4	6	-6	1	2	-3	-4	-8	-16		-46	2	19	4	-1	19	8	25	15
BURNLEY R.D.	-4	14	-1	1	-2	3	-7	3	2	3	-1	-5		46		-10	-9	-14	1	2	1	2	25
COLNE M.B.	1	-4	3				2	-2	1	1		9	1	-2	10		18	-2	12	-1	4	1	52
NELSON M.B.	-7	-2	-7		-1	-3			-1	1	1	-19	-16	-19	9	-18		2	3	3		2	-72
PADIHAM U.D.	-4	-6	-1	-1	-1	-1		-1	-1	-2	-2			-4	14	2	-2			2	2	3	-3
TRAWDEN U.D.			-1				-1					1	2	1	-1	-12	-3						-14
BACUP M.B.	-7	-3	-1			-1	-1	-3	-1	1		-1	-5	-19	-2	1	-3	-2			-9	-26	-82
HASLINGDEN M.B.	-27	-3		-1	-1	1	-1		-1	-2	-4		-1	-8	-1	-4		-2		9		19	-27
RAWTENSTALL M.B.	-13	-5	2	-1	-1	-3	-2	-2	-2	-1	-1	-1	2	-25	-2	-1	-2	-3		26	-19		-58

household moves between local authorities in the study area in the period July 1965 - June 1967. They are based on an analysis of all moves recorded on our sampling frame used for the survey of out-migrants. Therefore while they do not represent the total number of actual household moves taking place in this period, they do accurately reflect the pattern of such moves.

MIGRATION TO DIFFERENT DESTINATIONS

B.13 It is apparent that migration is an aggregation of heterogenous groups of people moving for very different reasons. One of the clearest ways of examining this pattern is to isolate groups of people moving to specific destinations, who might be thought to exhibit common characteristics and motivations. For those destinations with sufficient numbers of migrants responding, we carried out analysis of household composition, age, and motivation. The destinations were necessarily the most popular ones, but they fall into three different broad categories -

(a) Seaside towns : Blackpool, Morecambe, Lytham St. Annes

(b) Large cities : London, Manchester and Stockport

(c) Nearby towns : Preston, Chorley

B.14 As was to he expected the motivations of migrants moving to these places varied considerably. Table B.5 shows migrants primary reasons for moving compared with the figures for all respondents in the survey. The differences between the groups of migrants are immediately apparent. In each of the three seaside towns, climate and environment, and family reasons account for abour two-thirds of migrants going there, compared with one-third of all migrants in the survey. In all three towns, the proportion of migrants moving primarily for work reasons was very mucy lower than average. For migrants to the two large cities, the proportion moving for work reasons was considerably above average, accounting for around half of all migrants. In the case of Preston and Chorley, the main departure from the average pattern is the much higher proportion moving for housing reasons, due to their close proximity to the study area.

TABLE B.5

PRIMARY REASONS FOR MOVING

	All Migrants %	Blackpool %	Morecambe %	Lytham St. Annes %	London %	Manchester and Stockport %	Preston %	Chorley %
Work	39	14	9	12	48	53	33	19
Housing	5	6	3	3	-	7	21	44
Climate and Environment	15	39	23	34	23	7	16	4
Family (incl. retiring)	18	26	41	34	19	20	14	15
Other reasons	4	6	18	10	3	-	10	11
No Primary Reason Given	20	9	6	7	7	3	6	7

B.15 Clearly migrations from the study area cannot be analysed or explained in terms of a total movement. Total migration is made up of fragmented elements, each of which is motivated by different causes, and will change in response to different factors. Thus improvement in housing conditions in the study area may reduce the number of people who move to Preston and Chorley, but will not necessarily affect the level of migration to e.g. Blackpool.

B.16 The different characteristics of migrants to these varied destinations is equally well shown by an analysis of the age of people moving. Table B.8. The most obvious point to emerge from the table is the very high proportion of people aged 60 or over, i.e. retired or very near to retirement, who moved to the seaside towns. This was a predictable explanation for the very high absolute level of migration to such towns, in relation to their size and distance from the study area. However it is far from being a complete explanation of their attraction, for in the case of Blackpool almost three-quarters of migrants were not of retiring age, and even at this reduced level Blackpool would still be easily the most popular destination for migrants from the study area. We can deduce from Table B.5 that the primary reason for these migrants leaving the study area was the climate and/or general environment of the area, and this underlines the potency of this factor. As a generalisation, we can say that even excluding the special case of retired people, the climate and environment of Blackpool attracts more migrants than e.g. the work opportunities of Manchester and Liverpool combined.

B.17 Looking at the other destinations, there are less marked differences between the age structures of migrants moving to the large cities and to the nearby towns. However it is noticeable that both London and Manchester have a higher proportion of young adults in the 15-24 age group. These are the migrants to whom the special attractions of a large city, such as entertainment, recreation etc. are likely to make their strongest appeal.

TABLE B.6

AGE AND SIZE OF MIGRANTS HOUSEHOLDS

Age of Migrants	Blackpool %	Morecambe %	Lytham St. Annes %	London %	Manchester & Stockport %	Preston %	Chorley %
0-14	20	17	19	32	29	25	35
15-24	11	11	5	16	21	13	11
25-30	11	1	7	16	5	19	17
31-44	16	13	18	16	14	15	19
45-59	8	13	14	8	24	15	10
60+	27	45	34	11	7	7	6
N.A.	7	-	3	1	-	6	2
Average no. of people per household	2.74	2.47	2.15	2.97	2.80	2.94	3.15

Migration Questionnaire

03029

Confidential

Survey of Migration in North East Lancashire

There is no need to put your name and address on this form. You can be completely satisfied that any information about your own or your family's circumstances will be used only in connection with this survey.

1. Where do you live now? ____________ Name of Town or Village ____________ County

2. When did you move to your present address? ____________ Month ____________ Year

3. Where did you live just before you made your last move? ____________ Name of Town or Village ____________ County

4. Please mark the square which describes your approximate age.

15-19	20-24	25-30	31-44	45-54	55-59	60 and over
☐	☐	☐	☐	☐	☐	☐

5. Would you please state whether you are male or female ____________

6. Are you single ☐ married ☐ widowed ☐ divorced ☐ Please tick.

7. If other members of your family moved with you please indicate in the table on the right their ages, sex and occupation, if working.

Other members of household	Age	Sex		Occupation
		Male	Female	
1.				
2.				
3.				
4.				
5.				
6.				
7.				

8. Please describe fully any qualifications which you have gained (e.g. recognised apprenticeship, O.N.C., G.C.E. 'A' levels, Dip. Tech., university degree).

9. Please describe fully your present occupation. If you hold a supervisory position or are self-employed, please mention this in your description. If you are unemployed or retired please state this also.

10. If you changed your occupation when you moved, please describe your previous occupation.

N.B. Your reply to questions 11 and 12 will NOT be used to contact your present or previous employer.

11. Could you please state the name and address of your employer before you moved

12. Please state the name and address of your present employer

13. Do you consider your new housing to be of a higher standard than that occupied before your move? Please delete word which does not apply. YES/NO.

14. Which of the following reasons were of importance to you in deciding to move? Please put a figure 1 in the square next to the reason you considered most important in the short list below. Please number any other reasons in order of significance.

☐ Work e.g. found better job elsewhere; local prospects poor.

☐ Housing. e.g. found better house in another area, former house too small.

☐ Climate and Environment. e.g. You considered climate poor or unhealthy. You found shops or schools poor.

☐ Family Reasons. e.g. to be near friends or relatives; to be married.

☐ Other Reasons, please describe

15. If work reasons were among those causing your move, please tick the appropriate square(s) below:-

Poor pay/got a better job ☐

Prospects poor/no security ☐

Disliked type of work ☐

Transferred by employer ☐

Retained your original employment but moved closer to your workplace ☐

Was made redundant ☐

Left because of anticipated redundancy ☐

Short time/no overtime ☐

Too much shift work ☐

Unemployed/could find no suitable work ☐

Other reasons connected with employment, please describe

16. If housing reasons were among those causing your move, please tick the appropriate square(s) below:-

Wanted larger house ☐

Wanted smaller house ☐

Low standard of amenity in previous dwelling, e.g. no fixed bath, poor heating ☐

No suitable local property for sale ☐

No suitable accommodation available locally for rent from private individuals ☐

No suitable housing available for rent from local council ☐

Wanted separate accommodation ☐

Other reasons connected with accommodation, please describe

17. If climate or environment were among the reasons causing your move, please tick the appropriate square(s) below:-

You did not like the surroundings ☐

You did not like the climate or found it unhealthy ☐

You were too far from, or dissatisfied with local shops and/or schools ☐

Too far from, or dissatisfied with, local entertainment or cultural facilities ☐

Other reasons connected with climate or environment, please describe

18. If family or personal reasons influenced your move, please tick the appropriate square(s) below:-

To get married ☐

To live with friends or relatives ☐

To be near friends or relatives ☐

To retire ☐

19. If you moved for any other reason not included above, please describe

20. Would you consider returning to your previous area?

21. If your answer to the previous question was yes, please outline the circumstances under which you would return

When you have completed this form, please return it in the enclosed envelope.

THANK YOU VERY MUCH FOR YOUR CO-OPERATION

Great Harwood

Appendix C

Survey of recent graduates from North East Lancashire

C.1 We sent a questionnaire to some 400 people whose homes were in the North who had recently successfully undertaken a course of further education. The great majority of these people had obtained degrees, the exceptions being somewhat lower qualifications, such as H.N.D. and Diplomas. This group may be taken as representing the intellectual elite of the young people of North East Lancashire, and the purpose of circularising them was to try to discover what the subregion offers by way of employment opportunities and prospects.

C.2 The questionnaire was largely confined to purely factual matters concerning the employment of the respondent, and in analysing, the replies it is convenient to divide the 227 respondents into four groups (Table C.1).

C.3 We ignore for the moment groups D (non-graduates) and C (people within universities) and look first at the total figures for groups A and B, which comprise almost all the graduates who have found permanent employment. Of these 164 people, less than one quarter are working within North East Lancashire. There are two possible reasons for this situation. First, people may not wish to work in the subregion. Second, the opportunities for employment may not exist. In some instances, of course, both factors may operate. However, it is possible to make a rough assessment of the importance of these factors in two ways.

C.4 First, we can distinguish between those occupations which are geographically widespread, i.e. tend to be distributed more or less in accordance with population, and other occupations which tend to be more highly concentrated in a relatively few areas. It is reasonable to assume that it is easier for a person to find a job in the

TABLE C.1 OCCUPATION AND LOCATION OF GRADUATES

Occupation Employment in:	North East Lancashire	Elsewhere	Total	%in North East Lancashire
A				
Teaching	14	33	47	30
Solicitors	8	3	11	73
Other Professions (e.g. medical, architechtural)	4	8	12	33
Public Services (N.E.C.)	5	19	24	21
Total Group A	31	63	94	33
B				
Industry (industrial construction)	9	61	70	13
Total A and B	40	124	164	24
C				
Research, University, Teaching	-	37	37	-
Total A + B + C	40	161	201	20
D				
Non-Graduates	15	11	26	58
Total A + B + C + D	55	172	227	24

area in which he would like to work in the case of the first type of occupation - group A, than of the second, group B, and in fact we find that 33% of people in group A work in North East Lancashire as compared to only 13% in group B. This suggests that, if geographical preferences do not differ markedly among the people entering the various occupations, then the second reason, i.e. lack of opportunity is extremely important in explaining the low percentage of those who entered industry who work in North East Lancashire.

C.5 This is confirmed by the alternative approach. The final question asked: "Please add any comment which you may wish to make concerning existing employment opportunities in North East Lancashire. If you work outside the subregion please say what changes would be required for you seriously to consider taking up employment in the subregion?"

C.6 We grouped the comments on employment opportunities made by those people who had gone into industry into three categories, positive, where the respondent thought that opportunities were good, neutral, where either the respondent thought that opportunities were average, or where he did not comment, and negative, where the respondent commented adversely on available opportunities.

C.7 Only one person thought that employment opportunities in the subregion were good, while eighty per cent made negative (often extremely negative) comments. This makes very sombre reading, particularly as the sample includes those people who were actually working in the subregion. A number of these commented negatively, saying, for example, that they were working for the only firm in the subregion which could offer them the kind of employment that they wanted, and that should they subsequently wish to change their employment - for example to obtain a more senior position - they would have to move out of North East Lancashire.

C.8 Moreover, this lack of opportunities is apparent for all occupations, and for the graduates in all disciplines (Tables C.2, C.3). However, an analysis of the replies to this question from people in group A shows a very different picture. There are still very few people who think that opportunities

TABLE C.2 COMMENTS ON EMPLOYMENT OPPORTUNITIES IN INDUSTRY IN NORTH EAST LANCASHIRE BY OCCUPATION

Occupation - Number of Comments	Positive	Neutral	Negative	Total
Research and Development	-	4	21	25
Computers, etc.	-	3	5	8
Production Management	1	-	7	8
Electrical & Mechanical Engineering	-	2	5	7
Civil Engineering	-	1	8	9
Education and Personnel	-	1	3	4
Marketing and Sales	-	1	5	6
Miscellaneous	-	1	2	3
Total	1	13	56	70

are particularly good in the subregion, but the number of negative comments falls from 80% to 44%.

C.9 Some of the negative comments are, as was the case in industry, to the effect that no opportunities exist. This is particularly true of people working in highly specialised public service institutions e.g. the Medical Research Council. However, the majority of these negative comments refer not to the lack of posts, but rather to the poor prospects, with below average salaries and limited chances of promotion. Particularly important here is the lack of a large local authority which can offer the graduate civil engineer, town planner etc. the experience, the responsibility and the salary that he requires.

C.10 We also asked how important are factors other than employment opportunities to the recently qualified person in determining his place of employment? In reply to this 'open' question, only 32 respondents, (i.e. including groups C and D) mentioned one or more of these other factors as being a disincentive to taking employment in the subregion. This compared with 134 who mentioned inadequate employment opportunities. Since the question made a specific reference to employment opportunities, it was perhaps to be expected that this would get more attention than other factors. However, the difference between the number of mentions - 14% and 57% of respondents - is surely too great to be explained in these terms. Since moreover 14% refers to all other reasons, one may safely conclude that lack of opportunities is by far the greatest single factor influencing the geographical pattern of employment of such people. The specific reasons mentioned by these 32 respondents were as follows -

Cultural and Social Facilities	Environment	Climate	Other
17	14	7	3

(since some respondents gave more than one reason the total number exceeds 32).

C.11 We now consider briefly the 37 respondents in group C. A few in this group have taken up permanent employment as university teachers. The majority are still pursuing research and therefore could in theory subsequently take up employment in North East Lancashire. However, most of

TABLE C.3 COMMENTS ON EMPLOYMENT OPPORTUNITIES IN INDUSTRY IN NORTH EAST LANCASHIRE BY DISCIPLINE

Discipline - Number of Comments	Positive	Neutral	Negative	Total
Science	-	4	22	26
Engineering	1	6	25	32
Arts and Social Studies	-	3	9	12
Total	1	13	56	70

them have embarked, or intend to embark, upon highly specialised careers and it is clear from the remarks made by this group (and by those graduates who have entered industry), that all, or almost all, will find employment outside the subregion. This will mean that the proportion of the subregion's graduates who take up employment within North East Lancashire will be about 20%.

C.12 For Group D, the picture is quite different, with 58% having taken up employment in North East Lancashire. There are important reasons for this higher percentage. First, a greater proportion of this group lived at home while studying, and hence did not make the break that often proves to be permanent. Secondly, some members of the group have achieved qualifications specific to the textile industry. Thirdly, not having attended a university in most instances, these people would be less likely to be brought to the notice of the national employers who conduct interviews at the universities.

C.13 Indeed, in view of these factors, one might have expected the proportion working within North East Lancashire to be even higher. That it is not seems to be due to a fairly general feeling that prospects are brighter elsewhere. Fifteen respondents, (58%), made negative comments about employment opportunities, largely concerning the nature of the work that was offered - level or responsibility, and width of experience - and salary scales. The net effect of these factors was, as was stated above, that 58% of group D were working in the subregion, so that the overall percentage of our sample which had taken up, or was likely to take up employment in North East Lancashire, was 24%.

C.14 Hence it is clear, as is also brought out by the migration survey, that there is something of a 'brain drain' to other parts of the country. However, to put this into perspective two further points should be made. First, we have no way of measuring the net flow. It may well be that recent graduates formerly living in other areas have taken up work in North East Lancashire. However, the results of our manufacturing industry enquiry suggests that such an inflow is relatively small. Second, the experience of North East Lancashire is probably typical of many areas which lie away from the axis from South East Lancashire via the Midlands to South East England. Certainly the neighbouring Central Lancashire area seems to be even less successful in retaining its recent graduates. In an enquiry conducted some 12 month ago, we found that of 288 graduates who would together correspond to the groups A and B in the present study, only 16% found their first employment in Central Lancashire as compared to the 24% for North East Lancashire.

Appendix D

Manufacturing industry survey

D.1 Our Terms of Reference directed us to carry out a sample survey of industrial establishments. We did this using two methods of approach, interview and questionnaire.

D.2 From previous experience we have found that only a limited response can be expected from firms, particularly the smaller ones. Consequently all firms in the study area were approached by one of the two methods, in order to give the largest possible sample.

D.3 We interviewed firms with over 500 employees. In all cases we met either the managing director or a person responsible for the general management of the firm and in most cases the personnel manager was interviewed as well.

D.4 We asked questions covering the general history of the firm, the type of products, and the future policy of the firm. Where the firm was a branch of a national firm we asked about the way in which the plant fitted into the firm's national organisation, the degree of autonomy possessed by local management and the general advantages and disadvantages of North East Lancashire as a location. If the firm had recently moved to the area the reasons for the move were discussed. Managers were also questioned on the degree to which the plant was flexible in making different products and what their future plans were in terms of expansion or contraction of activity and diversification of products.

D.5 Personnel managers were asked about the skill composition of the labour force, the local supply of labour, and the firm's training programme amongst a large number of other questions.

D.6 All the firms interviewed were asked to fill out a copy of the questionnaire (see below) asking questions about the origin of raw materials and the destination of final output and the composition of the labour force. In addition to the firms interviewed all other manufacturing firms in the Study Area were sent a copy of the questionnaire which was produced in eight basic types with slightly varying format for different industrial groups.

We produce below a copy of a typical questionnaire; in this case the one sent to engineering firms.

The firms and organisations which co-operated in the survey are listed below. We wish to offer them our most sincere thanks for assistance which often involved considerable effort and without which the survey would not have been possible.

FIRMS WHICH HAVE COOPERATED IN THE INDUSTRIAL SURVEY

J.G. Coates (Burnley) Ltd.
H.E. Lupton & Sons 1952 Ltd.
Lupton & Place Ltd.
W.B. White & Sons Ltd.
Castle Castings Ltd.
B.E.L. Fitments Ltd.
Earby Light Engineers Ltd.
A.E.I. Ltd.
Neotechnic Engineering Ltd.
Asquith Electrics (Colne) Ltd.
ICI Plastics Division
ICI Agricultural Division
The Walpamur Company Ltd.
Dutton's Brewery Ltd.
The Burnley Papter Works Co., Ltd.
The Darwen Paper Mill Co., Ltd.
English Electric Co., Ltd.
J.M. Birtwistle & Co., (Mfrs.) Ltd.
East Lancashire Fireclay Co., Ltd.
Pioneer Oilsealing & Moulding Co., Ltd.
Rishton Paper Mills Ltd.
William Blythe & Co., Ltd.
Clayton Warp Knitters Ltd.
Sutcliffe & Clarkson Ltd.
Scotshaw Brook (Darwen) Paper Co., Ltd.
Fryer & Co., (Nelson) Ltd.
Scholes Rostron Ltd.
Coulton & Co., Ltd.
Bursgreen (Colne) Ltd.
James Baxter & Co.
Industrial Developments (Packaging) Ltd.
Remploy Factory
Rainbow Radio (Blackburn) Ltd.
Haydock & Drake Ltd.

J. & W. Whittaker (Bull Bridge) Ltd.
Machine Fabricators (Clayton) Ltd.
Joseph Wood & Co. (Bradford) Ltd.
Smith & Nephew Textiles Ltd.
John Maden & Son Ltd.
John Spencer (Burnley) Ltd.
Alexander Carus & Sons Ltd.
T. Haythorthwaite & Sons Ltd.
Goodshawfold Manufacturing Co. Ltd.
T. Foster Ltd.
Lancashire Hosiery Co., Ltd.
Metropolitan Flexible Products Ltd.
John Woodrow & Son Ltd.
Diana Cowpe Organisation
Harris Bolton & Co., Ltd.
Sheerloom Carpets Ltd.
East Lancashire Towel Co., Ltd.
Stonebridge Cotton Manufacturing Co., Ltd.
Highams Ltd.
Broadloom Carpets Ltd.
Philip Hall (Upholsterers) Ltd.
J. E. Simpson & Son Ltd.
The Perseverance Mill Co., Ltd.
D.J. Hall & Co., Ltd.
William Uttley Ltd.
William Reed Weaving Ltd.
John Baynes Ltd.
Thomas Mason Ltd.
Birtwistle & Fielding Ltd.
J. H. Hirst Ltd.
Robert Pickles Ltd.
The India Mills (Darwen) Ltd.
English Velvets Ltd.
Haythornthwaite & Sons Ltd.
Sandersons Ties Ltd.
Rishy Crisps Ltd.
Smiths Printer, Rishton, Ltd.
Calverts Pies Ltd.
Engineering & Glassfibre Developments Ltd.
The Reef Manufacturing Co., Ltd.
Reed Paper Group Ltd.
Matthew Brown & Co., Ltd.
Joseph Arnold & Co., Ltd.
Shepherds Ltd.
Daniel Thwaites & Co., Ltd.
The Wall Paper Manufacturers Ltd.
Nutter Aircrafts Ltd.
Burco Ltd.
The Prestige Group Ltd.
Northern Press-Knife Co., Ltd.
Belling & Co., Ltd.
William Birtwistle Allied Mills Ltd.
John Gregory (Nelson) Ltd.
Davies-Charlton (UK) Ltd.
N. T. C. Textiles Ltd.
Zurrer Silks (Darwen) Ltd.
Stonebridge Cotton Manufacturing Co., Ltd.
Southalls (Birmingham) Ltd.
Howard & Bullough Ltd.
Main Morley Ltd.
Park Bros. Ltd.
Mullard Ltd.
Bury & Masco Industries Ltd.
Sir H. W. Tricket Ltd.
Michelin Tyre Co., Ltd.
Samuel Holden Ltd.
British Northrop Ltd.
David Whitehead & Sons Ltd.
Joseph Lucas Ltd.
Royal Ordnance Factory (Blackburn) Ltd.
Samuel Courtauld & Co., Ltd.
Viyella International Ltd.
Singer Cobble Ltd.

Organisations which have given assistance:-

The Lancashire and Merseyside Industrial Development Association
The Lancashire Footwear Manufactuers Association
The Textile Council
Blackburn Chamber of Commerce
Burnley Chamber of Commerce
The National Coal Board
The Ministry of Agriculture
British Rail

1967

Confidential

Manufacturing Industry Survey for Mid-Lancashire and North East Lancashire

Name and address of firm

....

....

....

If the firm is a branch or subsidiary, give Name and Address of Head Office or Holding Company

....

....

Date of firm's establishment

(a) In the area..

(b) At present site..

Filling in the Questionnaire

1. This questionnaire is divided into four main sections. Section A requests some financial information for 1966 with regard to output and expenditure. This section is normally filled in by the accounts and/or sales and purchasing departments. There is a perforated edge so that the page can be removed from the rest of the questionnaire. These questions are of central importance as the answers will enable us to assess the volume of inter-firm transactions within the specified areas, an exercise essential to the formation of a viable economic structure for the region. Such data will also enable us to isolate any difficulties the region may have in the future in the supplying of various goods and services.

NOTE: If figures are not available for the information requested, please provide some percentage figures (e.g. of total value of output, percentage accounted for by each product).

2. Section B (loose in folder, as it is normally filled in by the personnel department) covers questions on labour usage and requirements. This is undoubtedly a major issue in any new development, and knowledge of the existing stock of the work-force puts us in a better position to ensure a balanced build up of population, work-force, skills, industry and educational facilities.

3. Section C is in two parts. Part 1 requires little written information. This section will help us to assess the subcontracting facilities which **could be provided** from existing firms in the area to new firms. Such facilities are important for the success of an "industrial complex" and we would not wish to recommend the establishment of new firms providing these facilities if they could be provided by existing firms in the areas of study. Part 2 covers plant and machinery used by the firm and is normally obtained from the plant register. The purpose here is to assess the level of technology in the area and this will play an important role in our projections.

4. Section D covers questions of a general nature and calls for comments by the management of the firm.

Your co-operation in this important exercise will be greatly appreciated. All the data will be treated in the strictest confidence by our firm and will not be released to any other persons or organisations without the written consent of the firm filling in the questionnaire.

Could you please return this questionnaire on completion to:

Economic Consultants Limited,
4th Floor, Crystal House,
Birley Street,
Preston, Lancs.

No. One

Section A. Accounts Information

(a) Value of output (1966)

Please specify in as much detail as possible the value of output for 1966 of the various products you produce, along with some indication as to their destination as specified in the appropriate columns. **Note:** If you are unable to provide the value figures for each product, please list the products in order of importance (or, if possible, the percentage of total value of output they account for) and give some indication as to their destination, as specified in the appropriate columns.

PRODUCT (Please list in order of importance)	Value of output of product (1966) £	Approximate percentage of output of product sold to organizations within the following areas * Preston/ Leyland/ Chorley, etc. (1) %	Blackburn/ Burnley/ Clitheroe, etc. (2) %	Rest of N.W. Region (3) %	Other areas (incl. overseas) (4) %	Total %	Major industries in areas (1) and (2) **only** to which products sold (e.g. aircraft, vehicles, wholesaling, machine tools, textiles, etc.)
e.g. (Cast iron pipes)	(25,000)	(10%)	(4%)	(20%)	(66%)	(100%)	(1. Prntg. mchy, 2. Aircraft, 3. Vehicles)
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
Total Value of Output (1966)						100%	

* See enclosed map for definition of areas.

(b) Expenditures (on current account) 1966

Material items directly related to production (please specify in as much detail as possible) ITEM	Expenditure on item (1966) £	Approximate percentage of expenditure on specific item (input) purchased from firms located in the following areas * Preston/ Leyland/ Chorley, etc. (1) %	Blackburn/ Burnley/ Clitheroe, etc. (2) %	Rest of N.W. region (3) %	Other areas including overseas (4) %	Total %	Please list in order of importance the location of your major suppliers of the specified item who are in the "other areas," (Area 4), i.e. those suppliers who *are not* located in areas (1), (2) or (3)
e.g. (cast iron scrap)	(9,400)	(12%)	(25%)	(10%)	(53%)	100%	(1 Coventry, 2 Newcastle, 3 Glasgow)
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
						100%	
Total direct material expndtre.		—	—	—	—		—
Consumable tools, stores, matrls.						100%	
Carriage and freight						100%	
Packaging and packaging mtrls.						100%	

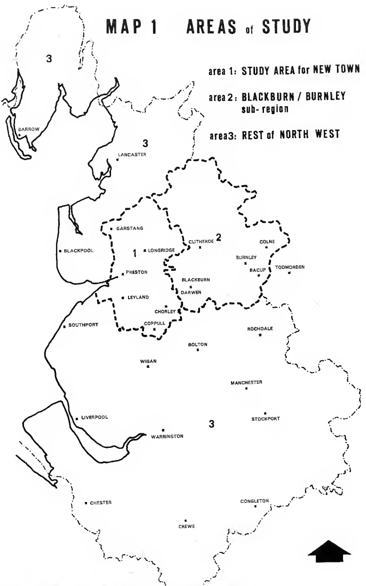
* See enclosed map for definition of areas.

Notes: 1. Please tick (✓) items above in (b) which are subject to substantial fluctuations from year to year with regard to area of purchase.
2. Please mark with a cross (X) those items which are mainly transfers from fellow corporation firms.

Labour cost, depreciation, rent and rates	Expenditure or allowance (1966) £
1. Total wages and salaries (including commissions, directors fees, national insurance, pension funds, etc.	
2. Total depreciation allowances on *all* items.	
3. Rents for land and building plant and machinery, office equipment, etc.	
4. Rate payment to local authorities	

Additional items and other overhead expenses	Expenditure (1966) £
1. Plant, machinery, equipment maintenance and repairs. Payments to other firms or organisations for maintenance and repairs to plant, machinery and equipment	
2. Gas, electricity, water	
3. Petrol, oils, fuels	
4. All other expenses not included in any of above (e.g. telephone, postal, licences, etc.)	

MAP 1 AREAS of STUDY



area 1: STUDY AREA for NEW TOWN

area 2: BLACKBURN / BURNLEY sub-region

area3: REST of NORTH WEST

Se

Ple

A

A

A

B

C

C

D

D

E

E

E

E

No. O

Section B. Labour Information

Please complete the form below relating to an analysis of numbers employed in various occupations. Notes are provided overleaf for your guidan

	Occupation	Total Males (all Ages)	Total Females (all Ages)		GRAND TOTAL	Apprentices	Trainees		Mainten ance Worker
			F.T.	P.T.			M.	F.	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
A. 1	Managerial — General								
A. 2	Managerial — Production								
A. 3	Managerial — Sales and Packing								
B.	Scientists and Technologists								
C. 1	Technicians — Manufacturing								
C. 2	Technicians — Ancillary								
D. 1	Professional — Accounting								
D. 2	Professional — Personnel								
E. 1	Craftsman — Supervisory								
E. 2	Other Manual — Supervisory								
E. 3	Clerical — Supervisory								
F. 1	Clerical — Secretarial								
F. 2	Clerical — Accounting								
F. 3	Clerical — Industrial								
G. 1	Toolmakers, Toolroom Fitters								
G. 2	Machine Tool Setters, Setter Operators								
G. 3	Skilled Machine Tool Operators								
G. 4	Fitters (Mechanical)								
G. 5	Electricians								
G. 6	Welders								
G. 7	Sheet Metal Workers								
G. 8	Inspectors, Markers Off								
G. 9	Pattern Makers								
G.10	Moulders, Coremakers								
G.11	Platers								
G.12	Coachbuilders, Bodybuilders								
G.13	Carpenters, Joiners								
G.14	Bricklayers								
G.15	Other Skilled Workers								
G.16	Apprentices taking General Course								
H.	Production Workers requiring more than 6 months' training								
I. I. 1	Production W'kers requiring 1-6 m'ths' training Machinists								
I. 2	Assemblers and Viewers								
I. 3	Other								
J.	Product'n W'kers requiring up to 1 m'th's tr'ning								
K. 1	Auxiliary — Stores								
K. 2	Auxiliary — Sales and Purchasing (Non-Clerical)								
K. 3	Auxiliary — Road Transport Drivers								
K. 4	Auxiliary — Welfare								
L.	Labourers and Canteen Personnel								
	GRAND TOTAL								

Notes

Each employee should be entered only once against the occupation for which he is engaged most of the time.

Column (2)	Should include all males employed, including those entered in Columns (6), (7) and (9).
Columns (3) and (4)	Should include all females employed, including those entered in Column (8). Part-time workers are defined as those employed for less than 30 hours per week.
Column (5)	Should include all workers.
Column (6)	Please denote any female apprentices in brackets.
Column (9)	Should only include Craftsmen engaged on maintenance.
Category A	Should include Executive Directors.
Category B	The qualification is a University Degree in Science or Technology and/or membership of an appropriate professional institution, e.g., A.M.I.Mech.E. (Managers possessing such qualifications should be included in Category A).
Category C	Should include those carrying out functions intermediate between scientists and technologists and skilled craftsmen and operatives. C1 applies to those engaged on Planning and Design. C2 applies to those engaged on Testing, Inspection and Instruction.
Category D	Should include professionally qualified employees, e.g., those who are members of the I.C.W.A. or the I.P.M.
Category E	Should include all those whose main function is the supervision of other employees — E1 includes those who are craftsmen, E2 other manual workers, E3 clerical workers.
Category F1	Should include secretaries, typists, telephone operators, etc.
Category F2	Should include comptometer operators, accounts clerks, etc.
Category F3	Should include shop clerks, progress chasers, etc.
Category G	The normal method of entry to such occupations is by apprenticeship or equivalent training.
Categories H, I, J	Those employees currently receiving planned training or re-training should be included additionally in Columns (7) and (8).
Category K2	Should include sales representatives, etc.
Category K4	Should include safety Officers, nurses, security Guards.

2. Total Employment
(1) 1961 :....................
(2) 1966 :....................
(3) 1967 :....................

3. What changes have taken place in the occupational structure of the Labour Force and/or the Male/Female mix during the years 1961-67 ?

Please state whether these were due to changes in the scale or range of production, and how far due to technological change or organisational change, e.g., the introduction of multi-shift working or the installation of a computer.

4. Estimated Total Employment 1971 :....................

5. What changes do you anticipate in the occupational structure of the labour force and/or the Male/Female mix during the years 1967-71 ?

Please state whether you expect these to be due to changes in the scale or range of production, technological changes or organisational changes, e.g., the introduction of multi-shift working or the installation of a computer.

6. Do you envisage amending your present training arrangements in relation to the changes anticipated above, e.g., by increasing the number of traineeships, or by adaptation of the skills of the existing work-force ?

Name and position of person filling in this portion of the questionnaire....................

Section C. Subcontracting Facilities and Machine Tools

1. Subcontracting Facilities

(a) Please indicate with a tick (✓) in the appropriate column (or columns) those subcontracting facilities which you now offer and/or would be able to permanently offer in the future to other firms (on both "long orders" and "short orders" or "one-off basis") under the assumption that there will be a large influx of manufacturing firms into the Central Lancashire Area over the next twenty years, mainly in the mechanical and electrical engineering categories.

Note: If you can and do provide a particular facility now and will be able to provide that facility in the future please tick (✓) both columns. If you provide more specialised subcontracting facilities which are not listed in the table (e.g. panel beating, export packaging, etc.), please indicate these in the space provided in Question (b) below the table, stating the type of customer you provide these to (e.g. private consumers, vehicle manufacturers, textile manufacturers, government departments, etc.).

Subcontracting facility	Provide now	Could provide in future
A. METAL FORMING		
1. CASTING		
(a) Ferrous Castings		
i Iron castings:		
—general		
—malleable		
—precision		
ii Steel castings		
—general		
—precision		
(b) Non-ferrous castings		
i Sand castings		
ii Gravity Diecasting		
iii Pressure Diecasting		
iv Other precision casting		
2. MOULDING		
3. FORGING		
4. PRESSING		
(a) Light		
(b) Heavy		
5. OTHER (please specify)		

Subcontracting facility	Provide now	Could provide in future
B MACHINING		
1. Turning		
2. Drilling		
3 Boring		
4 Grinding		
5. Planing		
6. Milling		
7. Hobbing		
8. Broaching		
9. Electro-chemical		
10. Ultrasonic		
11. Chemical		
12. Other (please specify)		
C. ASSEMBLY		
1. Welding		
2. Soldering 3. Rivetting		
5. Brazing		
5. Other (please specify)		

Subcontracting facility	Provide now	Could provide in future
D. FINISHING		
1. Blasting		
2. Marking, Engraving, Embossing		
3. Polishing		
4. Parkerizing, Anodizing Sherodizing		
5. Plating 6 Enamelling and painting		
7. Other (please specify)		
E. OTHER		
1 Heat treatment		
2. Hot Working		
3. Cold working		
4. Powder metal forming		
5. Other not mentioned (please specify, e.g. explosive forming, magnetic forming)		

(b) Of the above subcontracting facilities you have marked with a tick (✓), could you give some general comments as to the type, size and range of acceptable orders and the tolerances within which you work now and wish to handle in the future.

(e.g grey iron castings of all grades up to B.S.G. of 26. Normal casting tolerances cope with castings up to 5 tons. Orders of all lengths acceptable, including "one-off" work. Now moving into S.G. iron castings).

2. Machine Tools

(a) Could you please give details of any machine tools you have installed at your plant which are not of the standard type. This would include large and precision machine tools, automatic equipment and equipment of advanced technological nature.

Note: If there is insufficient space left in the following table, please attach separate sheet.

Type of equipment	Capacity, Special attachments and general comment	Maker of equipment	Year of purchase	Cost at purchase

(b) Could you please give details of any addition to plant and machinery in the foreseeable future, especially that of a high technology nature (e.g. tape control machines, transfer machines, high energy rate extruding machines, etc.).

*Name and position of person filling in this portion of the questionnaire*____

Section D. General

1. Do you feel that a lack of working area, either at your present site(s) or in the near vicinity of your present site is likely to impede the growth of your company within the next ten years. (Please tick): Yes________ No________ If yes, please give reason (e.g., lack of ground floor space):

2. Is any major re-organisation of the activities of your company in the area contemplated in the foreseeable future? Yes________ No________ If yes, please specify:

3. Do you contemplate in the foreseeable future (e.g. 1971) any changes in the type of products you produce? (e.g. introduction of new products, discontinuing of certain existing products) Yes________ No________ If yes, please specify, giving details as to how this may effect your operations:

4. Given a continuation of present circumstances, that is no New Town in Central Lancashire, how do you view the future of your firm in the area?

5. If there is a growth of new industry, particularly in the metal working trades, in the Central Lancashire area over the next twenty years, how do you feel that this will affect the operations of your firm? For example, by its impact on the labour market or by the provision of new markets or sources of materials:

*Name and position of person filling in this portion of the questionnaire*____

Appendix E

Town centre retail model

E.1 A model was required which would enable us to predict the level of trade in North East Lancashire under two sets of conditions - with and without the new town. In particular it should enable us to quantify the effects of two factors :-

a) The change in the distribution of population induced by the new town.

b) The greater attraction of the new town's existing shopping centres and the impact of its new shopping centres.

The model used was a distributional one of the 'gravity' type developed for the Baltimore Study* and applied to North West England by Manchester University**. Much of the basic research had already been carried out by Manchester University who made this available to us together with the necessary computer programmes.

E.2 The model postulates that people living in an area 'i' will spend a proportion of its money in a shopping centre 'j' in direct relation to the attractiveness of 'i', in inverse relation to the distance from 'i' to 'j' and inverse relation to the attractiveness and accessibility of other shopping centres. Algebraically, this can be expressed as follows:

$$S_{ij} \; = \; C_i . F_j^{\alpha} / \, d_{ij}^{\beta} . \quad \sum_{k=1}^{m} (F_k^{\alpha} / d_{ik}^{\beta})$$

where:-

S_{ij} is the expenditure by residents of 'i' in centre 'j'
C_i is the total expenditure of residents of 'i'
F_j is the attraction power of centre 'j'
d_{ij} is the travelling time in minutes from 'i' to 'j'
K(1...m) are all the centres (including 'j')
considered α and β are parameters to be estimated.

The total turnover in centre 'j' is thus given by

$$\sum_{i=1}^{n} S_{ij}$$

E.3 The model thus requires three sets of information - the distribution of spending power by residential area; measures of attraction power for each centre; and a matrix of travelling time from each residential zone to each centre. The best values of α and β can then be estimated by working several trial runs and choosing those values which gave the best fit with the known (1961) turnover figures for each centre.

E.4 Manchester University's work covered the trade in durable goods in a large area including the North West Region and parts of Yorkshire, the West Midlands and North Wales. Projections of retail trade were made for 1971 for some 50 major shopping centres of which five (Blackburn, Accrington, Burnley, Nelson and Darwen) were in North East Lancashire, and two, (Preston and Chorley) were in Central Lancashire.

E.5 We took this work a stage further by running the model for 1981 and 1991, with and without a new town, (so that there were four runs) under the following conditions:-

a) The parameters α and β and the measures of shopping attraction found by Manchester University to give the best fit with 1961 data were adopted.

b) We collected and prepared information on the likely future road network, population distribution, and changes in the relative attraction of centres (see below).

c) The analysis was confined to durable goods trade* after excluding the trade of shops outside main shopping centres.

d) The analysis was carried out in terms of 1961 spending power, as this would make a comparison of the relative growth in the attraction indices and a first attempt at evaluation in terms of current rateable values more meaningful.

---

*See Lakshmanan and Hansen 'A Retail Potential Model'. Journal of the American Institute of Planners, May 1965.

** 'Regional Shopping Centres in North West England, Part 2' Manchester University 1967.

* Defined as the turnover of clothing and footwear, household goods and miscellaneous non-food shops; and of variety, department and other general stores.

e) As in the Manchester study, only five North East Lancashire shopping centres were studied. For the situation with the new town, two additional shopping centres were introduced.

E.6 The inputs to the model were as follows:-

(a) 'd' Values

Manchester University had constructed a matrix of travelling times between every shopping centre and every residential zone. This was based on assumed private car speeds of:

Motorway	50 mph
Trunk Road	40 mph
Other A Roads	30 mph
Built-up areas & unclassified roads	20 mph

Changes were made to this matrix to allow for further changes in the road network. All programmed and proposed alterations in North East Lancashire were considered as were:

M61 Preston-Manchester
M62 Liverpool-Yorkshire
Blackpool-Preston Motorway
Liverpool-Preston Motorway
North Cheshire Motorway
Bury Eastern By-Pass

This involved large amounts of computation and the work was done only for Lancashire and three parts of Northern Cheshire for which the information was also required for the parallel journey to work study. The other parts of the matrix were assumed unchanged from the 1971 values.

(b) 'C' Values

For the preliminary analyses, estimates of 1961 spending power were used. These were developed by Manchester University according to a formula using the social class structure of each local authority area. From these estimates of total trade generated within an area were extracted the turnover in shops outside the major centres. This gave an estimate of the 'mobile' trade in durable goods. This was assumed to remain unchanged as a proportion of total durables expenditure.

(c) Population estimates for the North West were obtained from the Ministry of Housing in Manchester on a sub-regional basis for 1981. These were based on the Registrar-General's estimates of natural change and on the Department of Economic Affairs assumptions on migratory change. The 1991 figures were then obtained by extrapolating 1961-81 trends. Information on Warrington, Central Lancashire New Town, Runcorn and Skelmersdale were obtained from the respective Master Plan or Designation Reports. For the other local authority areas, the estimates were generally made by allocating the 1981 and 1991 populations of each sub-region in the same proportions as were found in 1964. Figures for the peripheral areas were estimated on the basis of planning strategies outlined in the respective regional reports*.

(d) 'F' Values

The method found by Manchester University to give a good description of 1961 trading patterns was one whereby a 'score' was given to each town according to whether or not it possessed certain types of shop, stores and branches of multiple shops. It was then suggested that the future scores could be estimated by increasing the 1961 scores in accordance with a subjective estimate of the increase in the centre's catchment area. This was the method adopted here except that one further refinement was introduced. Changes in the scores between 1961 and 1966 were charted by studying where each of the 'indicator' shops had established themselves during the period. This raises an interesting methodological point, however. If the stores are merely indicators of a centre's importance, then the establishment of a new branch does not necessarily make that centre more attractive to the customer and it should be ignored. However, if the store is actually part of the attraction of the centre, then such new establishments must be taken into account. Two considerations made this less of a problem in practice. First, if a new shop such as British Home Stores in Blackburn was coupled with a redevelopment scheme it would be valid to give Blackburn an extra score on both grounds - the centre had become more attractive (presumably), whether or not the store formed part of its attraction. Secondly, it was possible to get a check by comparing the future 'F' values with the predicted trade (see below).

E.7 The 1966 scores were thus adopted and changed in accordance with the population change assumed in each sub-region. The 1966-81 changes are shown in Table E.1. A further percentage change of the same amount was taken for the 1981-1991 period. In addition, special considerations were given to new towns and town expansion schemes. 'F' values were estimated by comparing the values of other towns of similar size, or by making a rough estimate of the size of its hinterland. The values assumed for towns affecting North East and Central Lancashire are shown in Table E.2.

---

* 'Wales, the Way Ahead'. Welsh Office 1967. 'The West Midlands' 1965. 'Yorkshire & Humberside' 1966.

RESULTS

E.8 The results are shown in Sections 13 and 18 of the report, but some points of interpretation can be mentioned here :-

a) The 'F' values were estimated for feeding into the model, by linking changes in them to population changes. This assumes that retailers will colonise shopping centres in response to population increase. To provide a check on the charges assumed we prepared scatter diagrams of 'F' values against turnover for each town centre. All the points did not lie on the 'best fit' line, but it appears reasonable to expect a particular town to be approximately the same distance away from it at each date - 1961, 1981 and 1991. On this basis, the Preston 'F' values were somewhat lower than might have been expected, in fact the growth in its trade caused by the building of new motorways was considerably greater than we had anticipated. However, the discrepancies were about the same both with and without the new town, and should not affect the impact figure. Similarly, the increase assumed for Blackpool appeared unrealistic (unless there is a rapid increase in its holiday trade, which is unlikely). The most striking point, however, was that the increases given to Blackburn were not matched by increases in turnover. In this case, however, the increase in 'F' value was not geared to population change but to establishments by retailers which have already taken place.

TABLE E 1 CHANGES IN 'F' VALUES 1966-81

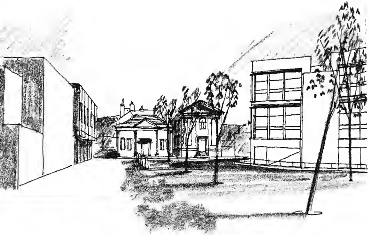
% Change Population	% Change 'F' Value	Subregions Affected
Up to 5	-5	N. Wales inland, North East Lancashire
5-10	0	N. Wales Coast, Merseyside, South East Lancashire, South Lancashire, Potteries
10.20	5	South Cheshire, Lancaster, Central Lancashire
20+	10	Fylde

b) The methodology assumed that the proportion of trade retained by local shops would remain constant in each local authority area. In fact, it is possible that the 'mobile' proportion will increase on account of increases in expenditure being largely on luxuries and goods for which the customer will travel. On the other hand it is possible that certain goods that are luxuries at the moment will cease to be so and choice will become less important to the customer. No attempt was made to evaluate these two factors but it should be noted that, if the first outweighs the second, then the estimates of 'impact' are somewhat underestimated.

TABLE E.2 'F' VALUES ASSUMED

Centre	1966	1981	1991
Preston*	23	24 (3)	25(35)
Leyland*	2	3 (9)	3(11)
Chorley*	6	7 (9)	7(12)
Grimsargh*	0	1 (1)	1(11)
Blackburn	22	21	20
Accrington	10	10	9
Darwen	7	7	6
Nelson	7	7	6
Burnley	12	11	11
Lancaster	13	14	14
Blackpool	27	30	33
Wigan	12	13	13
Manchester	44	44	44
Liverpool	4	4	4
Bury	11	11	11
Bolton	26	26	26

Notes: * Figures assuming new town in brackets. Also Leyland was not included in the 1961 analysis.



Rawtenstall. New shopping centre (left) and Borough Office extension

Appendix F

Questionnaire to local authorities

F.1 The Terms of Reference stated that the study was to make maximum use of work already done and that local authorities, the North West Regional Economic Planning Council and other authorities in the area should be consulted for the benefit of their knowledge and experience.

F.2 The following six part questionnaire was therefore sent to local authorities.

PART ONE
GENERAL INFORMATION

1. BASIC INFORMATION
Please mark on attached 6" - 1 mile map :-

a) Ward boundaries and names of wards
b) The extent of completed development as at mid 1967 (boundary)
c) Development at present in progress
d) Outstanding planning consents

2. LAND USE INFORMATION
Please provide if available an up-to-date, keyed, land use map of your area. If no up-to-date land use plan is available, the following headings may be of use in preparing such a plan.

a) Areas predominantly residential
b) Areas of predominantly industrial land use, if possible, location of major industrial developments.
c) Public open space
d) Major private open spaces
e) Concentrations of commercial and retail development.
f) Location of Further Education Institutes, Secondary and Primary Schools
g) Civic and cultural land use
h) Land owned by Statutory undertakers (specific ownerships defined)
i) Approximate boundary of central area or town centre

If you are a County Borough please provide a copy of your Development Plan and Written Statement and any other relevant planning policy maps or documents.

3. COMMUNICATIONS/TRANSPORT

Please provide :-

a) A map of local bus routes by operator
b) A timetable of services
c) Any information held on car ownership figures by ward or any sub-division of ward

If no information on (c) above is available, any details on dwellings with garages by percentage within wards of sub-divisions of wards and any information of on-street parking in residential areas you may have. Broad indications would be of value.

d) Location, extent of site and capacity of off-street parking facilities
e) Number of metered parking spaces, if any
f) Results of any car-parking surveys undertaken within the past two years in your centre or main streets.
g) Any other recent traffic survey information on traffic flow
h) Details of any proposed traffic survey to be undertaken this year which you can release

4. RATEABLE VALUE

Please provide a copy of the R.V. statistical appendix 1967. (This information will be treated as confidential if desired)

5. RENEWAL INDEX

Related to item (c) of heading No. 1 above, please provide :-

a) A map showing completed development by land use on sites over 2 acres between 1952 - 65
b) A map showing completed development by land use on sites over 2 acres 1965 - 67 (mid year) and details of development on those sites, e.g., type of premises, use of premises, number of dwellings, etc.

PART TWO

LIFE OF BUILDINGS, OCCUPANCY CHARACTERISTICS, DENSITY OF DEVELOPMENT

1. LIFE OF BUILDING

The objective of this study is to classify buildings by their potential life in four categories :-

a) Scheduled for clearance
b) Likely to be demolished by 1991
c) Could be rehabilitated to survive until 1991
d) Likely to survive the period from now until 1991

Please provide :-

a) A map showing your estimate, in general terms of how your area falls into these categories
b) Any information which may have obtained amplifying census data on household arrangements (e.g., WC's, baths, etc.)
c) Household improvements where these have been granted by ward

2. OCCUPANCY CHARACTERISTICS

Please provide :-

a) A map showing major LA housing sites and major areas of private residential development. (This can be done on the land use map.) Also up to date figures on total number of LA and private dwellings.

b) Any information you can provide on the socio-economic characteristics of the local population which amplified the 1961 Census. Plot on map streets with highest and lowest RV's.

3. DENSITY OF DEVELOPMENT

In terms of residential development within your boundaries please provide :-

a) An indication of the type (e.g., Private or LA) extent of, and density expressed in dwellings per acre, of what you consider to be areas of greatest and least intensity. Site plot and density in dwellings per acre.

b) Any information you may have on car parking facilities provided by industrial concerns for their employees.

c) A plot of the location of major employers.

PART THREE

DISTRIBUTION OF FACILITIES

Please plot on a map those facilities, existing or proposed, which are in your area :-

ADMINISTRATION
County Administration Office
Local Authority offices (town hall, etc.)
Police stations
Law courts :
crown court
county court
quarter sessions
permanent assizes
magistrates court
Fire stations
Civil Defence Headquarters
Statutory undertaking offices
Any other administrative facilities

EDUCATION
Further Education College
Technical colleges
Schools of arts and crafts
Schools of domestic arts
Industrial training schools
Training centres
Special schools
Grammar schools
Comprehensive schools
Secondary schools
Primary schools
Nursery schools
Any other educational facilities not listed above

WELFARE
Regional hospitals
Hospitals
Special homes/workshops
Aged persons' hostels
Mental health centres
Other special institutions
Health centres
Clinics
Day nurseries
Any other welfare facilities

CULTURE
Art galleries
Museums
Public assembly halls
Theatres
Dramatic societies
Cultural societies
Local assembly halls
Libraries (including mobile)
Any other cultural facilities

RECREATION
Stadium
Roller skating rink
Circus : permanent
visiting
Playing fields : private
public
Golf courses
Swimming pools : olympic standard
others
Teaching pools
Paddling pools
Bowling greens
Any other recreational facilities

ENTERTAINMENT
Cinemas
Night clubs
Casinos
Amusement parks
Dance halls (permanent)
Bowling alleys
Public houses
Bingo halls (permanent)
Working men's clubs
Other social clubs (if known)
Any other entertainment facilities

COMMERCIAL AND RETAIL
Chamber of Commerce
Town Centre shopping
Markets : permanent
occasional
Variety stores (in town centre and other)
Supermarkets (in town centre and other)
Is there a : Marks & Spencers
Woolworths
Lewis's
Boots
Any other chain store

PART FOUR

INDUSTRIAL CONDITION

A feature of the land use pattern which emerges from our survey is the large extent of land devoted to industrial use within urban areas and in particular the amount in close proximity to central areas. It will be helpful if you can give any information on the industrial premises in your area with regard to :-

a) Textile mills still operating
b) The condition of the property by site or groups of sites, classified under the appropriate category.
    i. structurally sound and well maintained
    ii. structurally sound but not well maintained
    iii. not structurally sound
c) The internal structural column spacing

The following additional questions were asked only of the four largest local authorities.

d) Vacant buildings and sites with the estimated period of vacancy
e) Partially occupied premises
f) Low use intensity, e.g., warehouses
g) Major industries in adapted premises, employing over 25 persons
h) Notional areas available for redevelopment
j) Whether there is a significant predominance of any particular types of industry

PART FIVE
HOUSING PROGRAMME
In order to project trends for the future of North East Lancashire it is necessary to have information on :-
a) The number of local authority dwellings which it is proposed to complete both in the current programme and in future programmes by annual totals

b) The number of dwellings which the council propose to demolish both in the current and future programmes by annual totals

c) The number of outstanding planning consents for private house construction and also the current rate at which applications are being received

PART SIX
SEWAGE DISPOSAL

The following questionnaire was sent to sewerage authorities :-

We wish to obtain further information relating to sewage, pumping stations on the following :-

a) Population served by system
b) Future expenditure
    i. authorised
    ii. proposed
    iii. estimated additional expenditure needed in next five years
c) Any general comments on the state of the system, special local problems, etc.

Appendix G

The impact of new industrial units on Merseyside

G.1 The evidence of existing journey to work patterns in North East Lancashire appears to suggest that the impact of industrial development to the west may be relatively slight, apart from the effect on certain categories of labour - those who may be suitable for promotion to supervisory positions or those in low-paying industries. However, a particular and feasible combination of circumstances might cause a considerable change of existing patterns and result in far more general impact on the study area. These circumstances would include the improvement of communications between Central and North East Lancashire, the arrival of a large firm which offered the prospect of consistently high earnings and following from this prospect, an increase in the level of car ownership in North East Lancashire An indication of the possible scale of impact in such circumstances is provided by the recent development of the Ford Motor Company at Halewood, Liverpool, and that of Vauxhall Motors at Ellesmere Port.

G.2 The pace of development at Halewood was extremely rapid, with employment reaching 10,000 in only four years, and it is improbable that such a rapid rate of growth, and certainly not growth to such an eventual size, will occur in the new town. Further, there is evidence that the size of employing unit, and possibly also the rate of growth, has an effect on the size of the catchment area (see Paragraph G.6). Nevertheless, information on what has actually happened in one area is useful in showing what might happen elsewhere.

G.3 From information provided by the Company, the distances travelled by various categories of workers in July 1966 were as shown in Table G.1.

The original information gave residence by postal address and it was not always possible to determine precisely the distance between residence and work-place. Hence, the figures may slightly under-estimate the average distance travelled. Only just over a quarter of the people lived within five miles of their work, compared to 80% in North East Lancashire (see Section 10). At the other extreme, and it is probably this figure that is of greatest significance in relation to the distance between the site for the proposed new town and the principal towns of North East Lancashire, 30% travelled more than ten miles.

G.4 It was decided not to break down this zone any further, since the vast majority of journeys would take at least as long as would the journey from Burnley to Preston under the improved communication facilities postulated in Paragraph G.1. At present this also applies to journeys between Blackburn and Preston. All three categories of workers have a substantial proportion of journeys of more than ten miles. However, these proportions are considerably higher for staff than for hourly-paid workers. When one allows for the fact that in the junior and intermediate staff grade there are a number of female employees who typically travel shorter distances than males, probably half the male staff employees travel more than ten miles.

G.5 It is also relevant to mention here that over 20% of the workers at Vauxhalls, Ellesmere Port plant, live north of the Mersey and thus undertake journeys of at least 10 miles, including passing through the often congested Mersey tunnel.

TABLE G.1 DISTANCE TRAVELLED BY DIFFERENT CATEGORIES OF STAFF

	5 miles No.	%	5-10 miles No.	%	10+ miles No.	%	Total No.	%
Hourly rated	2437	27	4222	54	2537	28	9196	100
Junior and Intermediate staff	409	28	444	30	616	42	1469	100
Senior Staff	17	23	2	3	55	74	74	100
Total	2863	26	4668	44	3208	30	10739	100

THE EFFECT OF SIZE AND RATE OF GROWTH

G.6 The size of the employing unit, and also perhaps the rate of growth, may affect the size of the catchment area for workers. The evidence about workers' movements in 1966 may be contrasted with earlier figures*. Of the first 3,000 hourly-rated employees, recruited in 1962 and 1963, 39% lived within a five mile radius of the plant and 12% ten miles or more away (since straight line distances were used distances travelled might have been slightly underestimated). Additional recruitment since 1963 has clearly led to a widening of the recruitment area. However, even at the 1963 scale of activities, the pattern was very different from the existing pattern in North East Lancashire.

WAGE RATES

G.7 One of the pre-conditions of a wider impact noted above was the prospect of consistently high earnings in new employment. It is difficult to answer definitely whether Ford's wide catchment area depends upon earnings which are above the average for Merseyside without considerable research. However, during the period of research for the article mentioned above, local rates, which were 9-16% below the Company's national rates, were applied. Furthermore, the level of overtime working was minimal and there was no shift working. "Consequently many of the early recruits worked in the plant for wage rates which might have been reasonably competitive in the district, but which were rarely supplemented by additional earnings". (See also below : Salt)

G. 8 Since then both wage rates and opportunities for additional earnings have increased considerably and this, together with the size factor discussed above, has doubtless widened the catchment area. However, the area was already in 1963 large by the standards of North East Lancashire.

G.9 There are certain other conclusions of general significance that can be drawn from the experience of Ford (and Vauxhall) on Merseyside. The first relates to the type of employer which might suffer particularly from developments of this nature. Considerable information on two aspects of this question, namely the size and the industry of the employer, is contained in the British Journal of Industrial Relations article and more especially in a thesis presented at Liverpool University by Mr. J. Salt, entitled "A consideration of some post-war unemployment problems in the Merseyside and Manchester conurbations". (Mr. Salt's thesis refers to a sample of 2,377 hourly paid workers out of a total of 12,734 such workers employed by the two companies at the end of 1964 or early in 1965).

G.10 The thesis gives a complete breakdown of the previous employment of the workers and this shows, for instance, that the engineering industry is a very important source of supply, especially for skilled workers, and that the declining transport industry provides many in the less skilled grades. However, it is of more relevance to attempt to show what the effect was on specific firms of certain types.

G.11 Taking Ford and Vauxhalls recruitment records separately, by the time of the inquiry, fourteen employers had each contributed at least 100 manual workers to one company or the other. The contribution from some companies was considerably higher than this. For example, taking the Ford and Vauxhall figures together there are contributions of 484 from English Electric Company and 376 from Joseph Lucas Limited. For these firms, which employ several thousands, such losses, while clearly most unwelcome, only comprise part of their normal turnover and consequently do not cause undue difficulty. Indeed, when Salt questioned some of the most important suppliers of labour to the car firms, they appeared to have felt the arrival of these firms not as special events, but as one of a series of developments which had gradually caused a general tightening of the labour market on Merseyside and with which they had learned to live.

G.12 However, the losses suffered by some of the smaller engineering companies were far more serious, as Table G.2 shows. The nine firms had on average lost 15% of their workers, but it will be noticed that all but one of these losses comprised skilled or semi-skilled workers, the losses in these categories being 20% and 28% respectively. Salt concluded that some of the small firms suffered proportionately more heavy losses because they were paying lower rates than the larger employers, and could not afford to increase these rates sufficiently to match the competition from the car firms.

G.13 The other factor of general significance is the very considerable number of workers who were attracted to the car firms from industries in which pay and/or conditions tend to be unsatisfactory. The total number of workers lost by British Railways, Liverpool Corporation Passenger Transport Department, the Mersey Docks and Harbour Board and the National Dock Labour Board was 1,332. This was not an entirely ill wind, since employment in British Railways was contracting at the time. However, the effect on Liverpool Corporation

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*Goodman and Samuel : British Journal of Industrial Relations, November 1966.

TABLE G.2 LOSSES TO FORD AND VAUXHALL BY SMALL ENGINEERING FIRMS

Firm	Skilled	Semi-skilled	Unskilled	Total
A	3 (10%)			3 (9%)
B		1 (25%)		1 (8%)
C	2 (50%)			2 (22%)
E	5 (21%)	10 (37%)		15 (18%)
F	4 (33%)	6 (33%)	1 (6%)	11 (24%)
G	2 (25%)			2 (22%)
H	2 (17%)	1		3 (18%)
I	20 (21%)			20 (13%)
J	1 (8%)			1 (5%)
Total	39 (20%)	18 (28%)	1 (1%)	58 (15%)

We have omitted from the table Firm D for which a detailed employment split was not available and which lost a total of only three workers.

Passenger Transport was extremely serious, the loss of 444 workers to Ford representing 12.0% of its total labour force. This is a dramatic illustration of how a large employer, offering a large proportion of non-skilled jobs, may affect the labour situation in a quite different industry.

G.14 The studies of both Salt and of Goodman and Samuel were confined to manual workers. However, one should not ignore the effects of staff employees, particularly since they tend to be willing to undertake longer journeys to work. We carried out a sample enquire into the past employment of 300 staff employees at Fords in various clerical or technical posts - costing, scheduling, laboratory analysis, design, etc. In one respect the position with regard to staff was similar to that for manual workers in that 30% of new recruits came from the ten most important suppliers. The engineering industry, however, was of even greater importance here, providing the six biggest suppliers, namely English Electric - 27, Lockheed Limited - 19, A.C. Delco - 12, B.I.C.C. - 10, Joseph Lucas - 8 and A.T.E. - 7. An analysis of the residence of these workers was not undertaken but some of the places of employment are some way from Halewood, at a time-distance comparable to that between Preston and Blackburn.

THE WORKERS

G.15 It is worth examining the kind of worker who is attracted to the car factories. If he is part of the floating population which exists in every area, the consequences for firms in the area would be less serious. However, the arrival of Ford and Vauxhall seems to have cuased a major upheaval in the labour market and many of their workers are people with a highly stable employment record, as shown by Table G.3, taken from Salt. For all workers and, incidentally, for all three categories of workers, skilled, semi-skilled and unskilled, more than 40% had been in their previous employment for at least five years. This figure could be affected by the fact that Ford gave attention to stability of employment in their selection procedures, and also by the fact that, at the time of the survey, people below the age of 20 were not recruited. On the other hand, only 16% of the work force was over the age of 39.

TABLE G.3 FORD : DURATION OF PREVIOUS EMPLOYMENT

Duration	Number	%
6 months	468	6.5
6-12 months	740	10.3
1-5 years	2968	41.2
5-10 years	1812	25.2
10+ years	1216	16.8
Total	7204	100.0

G.16 An alternative way of looking at stability is to take the number of jobs held in a given period, and here data is available for both Ford and Vauxhall (Table G.4). For Ford's 75% and for Vauxhall 50% of recruits had changed their jobs either once or not at all during the five years prior to joining the company.

TABLE G.4 NUMBER OF JOBS IN 5 YEARS PRIOR TO JOINING

Number of jobs	% of Ford Workers	% of Vauxhall Workers
1	42.1	42.6
2	32.8	27.1
3	19.3	18.0
4	5.6	8.3
5 or more	0.2	4.0

G.17 Why, however, do so many people who appear to have been reasonably content with their previous jobs now wish to change employers? There clearly might be a number of motives, but the most important appears to be the prospect of early promotion in a plant in which the demands for supervisory staff would be far greater than could be met from the ranks of long service Ford employees. Goodman and Samuel comment: "Many, judging from their applications, were prepared to move to the plant for security, promotion prospects and for the long term prospects of a growing and nationally highly paid industry. These hopes materialised for many of the early recruits. During the research period (i.e. 1963-64) the Company promoted over 100 men to supervisory positions with staff status and progressive salary scales after prolonged supervisory training."

G.18 The greater opportunities for promotion that existed for short service personnel were also demonstrated by our own research undertaken in 1967. Our sample covered 252 men who had become foremen since operations began at Halewood (at the time of the enquiry some of these had been promoted further). Of these, 161 were accepted for training as foremen within three years of joining the company. (This should be compared with the average period of thirteen years served by the 84 men who were promoted foremen from other Ford plants).

G.19 Of course, one might expect early promotion for men who had served in a supervisory capacity in their previous employment, but such experience was found in less than one quarter of a sample of 157, even if supervisory capacity is interpreted very widely indeed to include chargehands, inspectors and technicians of various kinds. The proportion of men previously working as foremen was only 6%. To return, finally, to the question of stability of employment, the average period served in the last job held by a sample of 143 foremen was almost six years.

G.20 In conclusion, the arrival of Ford on Merseyside inevitably caused something of an upheaval in the labour market. The development is of particular significance in showing that:-

a) The larger employers may expect to lose several hundred workers.

b) This will apply not only to firms in the same industry as the new firm but also to others, particularly if pay and/or conditions are unfavourable.

c) The geographical area affected is extremely wide, particularly with regard to staff employees.

d) Many of the workers attracted by the new firm are people with stable employment records who may well be attracted less by immediate financial advantages than by the longer-term prospects, including that of promotion.

G.21 With reference to the third point, it is interesting to compare the residence pattern of a third Merseyside engineering concern, A.C. Delco of Kirkby. This company recruited its first workers in the mid-1950's and has steadily increased its employment to over 2,000. This slower rate of growth and smaller size have combined to give a residence pattern somewhat different from those of the recently established car plants. These figures are also significantly different from the existing situation in North East Lancashire, particularly in that almost one-third of the skilled workers and almost one-half of staff employees travel more than 5 miles.

Appendix H

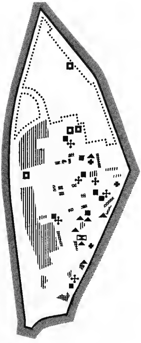
Rehabilitation possibilities

H.1 In Section 12 we discussed the financial advantages of rehabilitation and the housing conditions and total facilities that could be expected to be enjoyed in North East Lancashire in the future. Brief studies have been made of two Nineteenth Century residential areas - the low density St. Silas area in Blackburn and the high density Daneshouse area in Burnley - in order to evaluate the improvement in living conditions that might result from the implementation of rehabilitation. It is a broad appreciation, not attempting to assess the detailed architectural and economic implications which are discussed in the Deeplish and Halliwell Reports and which might be futher illuminated by the scheme being prepared for the St. Matthew Street area of Burnley.

DANESHOUSE, BURNLEY

H.2 Part of Daneshouse is already scheduled for clearance and the remainder is unlikely to survive beyond 1991 in its present condition. If an energetic policy of rehabilitation is pursued then Daneshouse appears eminently suitable for such treatment. Daneshouse is situated immediately to the north-east of the central area of Burnley and contains at present about 6,500 persons in some 2,000 dwellings at an average density of about 120 persons per acre. The area was developed about 1860-80 (a typical terrace house is illustrated in Figure 12.1) and contains a closely spaced grid of uniform terrace housing bounded to the east by Colne Road and to the west by factories lining the canal. The street pattern is wasteful of space. Houses are often lacking in basic facilities and their front doors open directly onto the pavement. The provision of offstreet parking and lockup garages is low, so that many vehicles are left to stand in the streets.

H.3 The age structure of the population is fairly well balanced, although there is a preponderance in the 45-64 age group. At present the population contains a high proportion of manual workers , particularly the skilled and semi-skilled and only a very small proportion of professional and clerical workers. It contains the facilities characteristic of the age of its building (Table H.1) and is well provided with pubs, corner shops, clubs and local assembly halls.

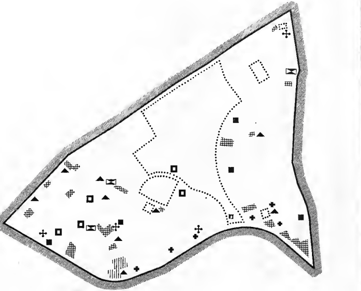


Welfare facilities	✚	Shops, business areas	▒
Churches	✢	Boundary	▨
Cultural facilities	■	Recreation areas	⬚
Entertainments	▲	Industrial areas	▥
		Post offices	⋈
		Schools	▣

H.1 DANESHOUSE, BURNLEY

TABLE H.1 DANESHOUSE, BURNLEY

EXISTING FACILITIES		ADDITIONAL FACILITIES	
In Area	Nearby	Fast Rehabilitation	Slow Rehabilitation
ADMINISTRATION Post Office	Nil	2 Political clubs Sub Post office	1 Political club Sub Post office
EDUCATION 2 Nursery schools 1 Secondary school 1 Junior infants	Primary schools	Comprehensive school (in or around)	Comprehensive school (around)
WELFARE 2 Surgeries 1 Public hall	2 Surgeries 1 Laundary	1 Day clinic 1 Clinic	1 Clinic
CULTURE 8 Local assembly halls	1 Library 1 local assembly hall 3 Churches	Cultural society Branch library	Cultural society
RECREATION 1 Playing field 1 Tennis ground 1 Putting green 3 Allotment gardens 1 Recreation ground 1 Playground 2 Bowling greens	2 Woods 1 Bowling green 2 Allotment gardens	2 Childrens play areas	2 Childrens play areas
ENTERTAINMENT Youth club 4 clubs 1 Cinema 3 Pubs/Inns	2 clubs 1 Cinema 2 Pubs	Bingo ball Dance hall Cafe/restaurant (near railway station)	Bingo hall Cafe
COMMERCE 1 Bank 1 Railway station	1 Hotel 2 Banks	Reduction in corner shops	Reduction in corner shops



Welfare facilities	✚	Shops, business areas	▒
Churches	✣	Boundary	▨
Cultural facilities	■	Recreation areas	⬚
Entertainments	▲	Industrial areas	▥
		Post offices	⊠
		Schools	▣

H.2 ST. SILAS, BLACKBURN

It is, however, deficient in facilities for recreation and welfare, in particular children's playgrounds and clinics.

H.4 If effort and resources are concentrated on carrying out a programme of rehabilitation over a short period of two to three years there are likely to be significant changes in the characteristics of the population. Early efforts to provide local open space, children's playgrounds and garage accommodation which would involve recasting the street pattern and demolishing some 200-250 dwellings might attract young families with children and might diminish the proportion of elderly people. The population of the area might drop by over 1,000 and the proportion of manual to professional and clerical workers might diminish. The costs of housing in the area would however have a considerable bearing upon this. Changes in facilities for this population will be of organisation and activity in the use of buildings rather than result from any substantial new building proposals. The number of corner shops will diminish and a small shopping area might well be established. A clinic and a day nursery are likely requirements in addition to the childrens' play areas. A branch library, a bingo hall, or a dance hall are possible facilities which might be added at a later stage.

H.5 If rehabilitation is carried through more slowly over a 5-10 period it is probable that the present characteristics of the population will be intensified rather than changed. The proportion in the elderly age groups would be stable or might increase while the younger age groups might decrease. The present proportion of manual workers might increase in relation to those of professional and clerical workers. All these changes would, however, be related to housing costs. The resulting changes in facilities are unlikely to be so wide-ranging; in particular the population might not justify the provision of a library, dance hall or day nursery and its need for open space and garaging might not be so great. Rehabilitation might be an essentially short-term solution to the problems of this area and the bringing of all houses up to the "full satisfactory standard" mentioned in Paragraph 12.6 might not be justified.

H.6 ST. SILAS, BLACKBURN

The St. Silas area of Blackburn is centred on Corporation Park and was laid out at about the same time as Daneshouse. It is situated to the north-west of the central area and contains at present 8,000 persons at a density of about 35 persons per acre. It contains both substantial detached houses and terrace housing of larger size and with longer gardens than that in Burnley. At present a high proportion of the population is in the elderly age groups. There is a deficiency in the 15-24 age group and there is a preponderance of clerical and skilled manual workers. It is exceptionally well provided with facilities and in particular enjoys the open space and recreational opportunities afforded by Corporation Park (Table H.2).

H.7 In view of the much lower density in St. Silas than in Daneshouse the population loss as a result of rehabilitation is likely to be small. A rapid rate of rehabilitation might again result in a generally younger population containing more professional and clerical and fewer skilled manual workers. Rehabilitation is likely to be of a considerably more limited nature than for Daneshouse, requiring the demolition of not more than 50 dwellings in conjunction with a limited revision of the road pattern to provide the additional facilities required. These might include day nurseries and possibly an integrated health centre might replace separate doctor's surgeries. If, however, a slow rate of rehabilitation were carried through the present characteristics of the population might be intensified and such a population might not justify the provision of facilities such as the health centre and might form fewer local societies.

TABLE H.2 ST. SILAS, BLACKBURN

EXISTING FACILITIES		ADDITIONAL FACILITIES	
In Area	Nearby	Fast Rehabilitation	Slow Rehabilitation
ADMINISTRATION			
Post office Local authority offices	Inland Revenue Police Station Sessions court GPO	Ratepayers' Association 2 Political clubs 1 Sub Post office	Sub Post office 1 Political club
EDUCATION			
School of Dom. Art 1 Grammar school 2 C.E. Primary schools	College of Technology Prep school Girls High School	Comprehensive school Further Education classes	Comprehensive school
WELFARE			
Old People's homes 1 Nursing home 1 NH Centre 1 Surgery 1 School for partially blind	Geriatric Hospital Nursing home clinic	Integrated Health centres 2 Day nurseries Workshop for blind	2 Surgeries 1 Clinic 1 Day nursery
CULTURE			
1 Library 3 Churches	Town centre library Local assembly hall Public halls	Dramatic society Cultural society Local assembly hall Annual exhibitions in park	Cultural society Local assembly hall
RECREATION			
12 Tennis courts 1 Golf course 1 Allotment garden Cricket club 2 Playgrounds 1 Private playing field 5 Bowling greens 9 Playgrounds	Tennis court	2-3 Childrens areas Boating club Visiting circus	1 Childrens play ares Visiting circus
ENTERTAINMENT			
13 Pubs Night club 1 Other club	Working Mens clubs YMCA Cinema	Reduction of pubs to 4	Reduction of pubs to 7
COMMERCE			
Scattered shops	Town centre market	Reduction of shops (natural). Formation of new local centre including small supermarket and bank	Reduction of small shops

Appendix J

The labour situation

J.1 Several aspects concerning the labour market in the study area are discussed here; earnings, unemployment - including a consideration of two recent redundancies, journey to work. in order to provide a context for an analysis of the local situation reference is also made to other areas.

EARNINGS

J.2 We undertook a brief study of earnings in North East Lancashire and in Preston-Leyland-Chorley, our objective being to compare earnings between various parts of North East Lancashire, between North East and Central Lancashire, and between these two areas and the country as a whole. To undertake a comprehensive earnings survey in so short a period of time would have been to attempt an impossible task. The many obstacles to be overcome in this type of survey include differences in job definitions that exist between firms, differences in methods of payment - piece work and time-rates, for example, the existence of supplements of various kinds, e.g. shift allowances, and the fluctuations in earnings that occur as the volume of work changes. These factors mean that it is very difficult to obtain an accurate result from such a small sample, and it is significant that the Ministry of Labour in the survey of earnings that it undertakes twice yearly, does not see fit to break down its results beyond the regional level. However, we have attempted to overcome these deficiencies by collecting information of two kinds. First, we have obtained information on earnings actually paid and received or offered. This information was obtained from three sources. First, employers provided information either in the form of copies of returns made to the Ministry of Labour, or in response to a questionnaire, or by allowing us to sample their payment records. Some 30 firms co-operated in this way. Second, the Ministry of Labour gave us details of the earnings quoted by employers when they notified vacancies at the local offices of the Ministry. Third, we obtained some information from workers who had recently changed their employment.

J.3 The advantage of this procedure is that we have data that we know to be accurate for the firms concerned, at least for the period to which the data relates. The disadvantage is that the sample is a limited one, and could be unrepresentative of the area in general. For this reason we also obtained from the managers of the employment exchanges estimates of average earnings in their area for a wide range of occupations.

ACTUAL EARNINGS

J.4 In so small a sample as this we could not hope to obtain information on earnings throughout the area in any particular occupations, (although as will be seen below, we have a fairly full coverage for certain occupations). What we have been able to do is to show how earnings vary in different areas for broad groups of occupations namely, skilled engineering workers and others. This data is not in fact as restricted as it may seem, since many of these workers in engineering occupations work in industries other than engineering, textiles, paper, rubber etc.

J.5 Our method of approach was as follows: for any given occupation we compared earnings in an area in North East Lancashire with those for Central Lancashire, (Preston-Leyland-Chorley). We then corrected this differential in actual earnings to take account of differences in hours worked, bringing the North East figure of hours worked up (or down) to the Central Lancashire level. We then, for the areas concerned averaged these differentials both actual and corrected. The results of this procedure are given in Table J.1.

J.6 It is not possible to say whether, in deciding where to work, a man will pay greater attention to his earnings alone or to his earnings and hours of work considered together. (It may well be, of course, that earnings alone will be the primary consideration until they reach a certain level, at which point leisure will become increasingly important). Although information on both bases is presented it is probably more appropriate to carry out the analysis here in terms of the corrected earnings, if only because most of the information that went into the above table related to earnings at a relatively few points of the year, when hours worked and thus uncorrected earnings could be some way from the norm.

J.7 It is clear from the Table J.1 that corrected earnings in manufacturing industry tend to be lower generally in North East than in Central Lancashire. Moreover the difference tends to be greater as one moves away from Preston, the one exception to this is the relatively high deficit for "other workers" in Blackburn. However, the differences are not very great, being less than £2 per week for skilled and £1.10.0d. per week for other workers at the extremities of the region. The picture with regard to uncorrected earnings is less regular, but all parts of North East Lancashire are deficit areas. Moreover the higher deficits are in the "others" category, a point whose significance is discussed below.

J.8 How do these figures compare with national earnings levels? We can answer this for at least some of the skilled occupations by examining the results of the enquiry undertaken by the Ministry of Labour in June 1967 into the occupational earnings and hours of adult male manual workers (Ministry of Labour Gazette, October 1967). Table J.2 sets out information from this survey, together with the results of our own enquiry, in respect of five occupations.

J.9 This table makes quite clear that there is a considerable differential between Central Lancashire, (and a fortiori of North East Lancashire) and the North West, or Great Britain as a whole. One can summarise this by saying that the average (unweighted) differentials for the five occupations are for Central Lancashire 72 shillings per week or 32 pence per hour, and for North East Lancashire 75 shillings per week or 37 pence per hour. Although it has been possible to undertake a detailed comparison of local and national earnings only for the above occupations, a more sketchy comparison for other occupations supports the contention that differentials of this magnitude are common.

ESTIMATED EARNINGS

J.10 As was mentioned above, the main reason for obtaining from the Ministry of Labour, estimated earnings was to widen our sample, so that we might have a more comprehensive view of the pattern within North East Lancashire, and a further comparison with Central Lancashire. Occupations in a number of industries were covered including engineering, textiles, rubber, footwear, etc. Occupations on which we had information on actual earnings were excluded. We again distinguished between two broad groups of workers, skilled engineering production workers and all other workers, - skilled non-engineering, semi-skilled and unskilled. The summarised results of this enquiry are given in Table J.3.

J.11 The picture here is far more uneven than for actual earnings. The reason for this is simply that more industries are covered here and that of these industries some are more important in one area than another. Since the differentials vary considerably from industry to industry, one would expect the area figures to vary also. One

TABLE J.1 AVERAGE DIFFERENTIALS IN EARNINGS FROM CENTRAL LANCASHIRE NEW TOWN (SHILLINGS PER WEEK).

Area	Skilled Engineering Workers[1]			Others[2]	
	Number of Occupations	Uncorrected	Corrected	Uncorrected	Corrected
Blackburn-Darwen	19	- 7/9	- 9/3	-26/6	-17/3
Accrington-Great Harwood	10	-30/4	-12/3	-39/6	- 9/6
Burnley-Padiham	15	- 3/9	-18/8	-79/11	-11/3
Nelson-Colne	8	-13/0	-30/10	-62/3	-23/6
Rossendale	10	-17/0	-38/3	-33/0	-28/3

1 e.g. tool room fitters, sheet metal workers, maintenance fitters, turners
2 e.g. paint sprayers, craftsmen's mate, drivers. All workers are men.

TABLE J.2 COMPARATIVE EARNING LEVELS

	T. Room fitters		Sh. metal workers		Turners etc		Maint. fitters		Maint. electricians	
	weekly	hourly	weekly	hourly	weekly	hourly	weekly	hourly	weekly	hourly
1	494	134	456	123	440	122	492	125	504	127
2	457	125	409	121	405	111	509	128	504	126
3	435	106	403	86	395	91	404	92	390	89
4	422	93	-	-	440	92	440	80	420	86
5	390	89	370	84	382	89	440	96	380	86
6	420	96	423	100	370	78	355	85	360	84
7	430	96	440	85	400	91	450	98	425	97
8	380	88	-	-	387	77	444	95	415	88

Notes: 1. Weekly earnings in shillings 2. Hourly earnings in pence

KEY TO TABLE J.2

1 = Great Britain
2 = North West Region
3 = Central Lancashire
4 = Blackburn
5 = Great Harwood
6 = Accrington
7 = Burnley
8 = Nelson

TABLE J.3 ESTIMATED DIFFERENTIALS IN EARNINGS FROM CENTRAL LANCASHIRE (SHILLINGS PER WEEK)

(A) Skilled Engineering Production Workers	No. of occupations	Uncorrected	Corrected
Area			
Blackburn-Darwen	13	-11/-	-37/5
Accrington-Great Harwood	18	-3/4	-39/6
Burnley-Padiham	5	-81/4	-54/3
Nelson-Colne	15	-3/-	-77/11
Rossendale	16	-36/4	-54/3
(B) Other Workers			
Area			
Blackburn-Darwen	13	-19/3	-5/9
Accrington-Great Harwood	21	-26/9	-41/7
Burnley-Padiham	8	-35/2	-1/4
Coine-Nelson	11	-12/8	-41/7
Rossendale	14	-79/-	-62/6

could, of course, explain these figures by presenting information industry by industry. However, the lack of space forbids this, and in any event we are more concerned to present the broad picture. This picture is once more one of higher earnings in Central than in North East Lancashire, with differentials again tending to increase as one moves away from Preston. Further, the magnitudes are reasonably similar, the average differential for estimated (corrected) earnings being about twelve to thirteen shillings a week greater than the actual corrected differentials.

EARNINGS SUMMARY

J.12 Although the general picture is clear, it is very difficult to express this briefly in quantified terms. However, very briefly, one can say that skilled engineering workers in North East Lancashire tend to get about £1 per week less than their counterparts in Central Lancashire. If one then corrects for the higher working week in North East Lancashire, the differential widens to around £1. 10. 0d. to £2. For other workers the differential is greater at about £2 per week. However here shorter hours tend to be worked in North East Lancashire, so that the corrected differential falls to under £1. 10. 0d. We have, then, differentials which by and large fall within the £1 to £2 range, with the differential tending to increase from West to east. This compares with average differentials from national earnings of around £4 a week actual or a corrected figure based on the hourly differential of around £6 per week.

UNEMPLOYMENT

J.13 The main body of the report contains a great deal of information on the changes in employment that have occurred in the area over a long period. We are here concerned with the more immediate past, and also to show how, during this shorter period, the situation in North East Lancashire has compared with that of nearby areas.

J.14 We start the analysis in 1963, the year after the textile depression which led to the emergence of very high rates of unemployment. Since that year, as can be seen from Table J.4, the area has not suffered unduly by comparison with the situation in Great Britain as a whole. However the relative position of the area (and of individual towns within the area) has varied considerably from year to year. These fluctuations are much more pronounced than in some other parts of the region, where the position relative to the national average has been far more stable. In particular, Central Lancashire has fairly consistently had an unemployment percentage below the national average, while the reverse has applied in the Fylde, Wigan and Southport areas.

J.15 One must, of course, look at these statistics of unemployment in North East Lancashire in conjunction with the material presented in the main body of the report on the growth of employment and on migration. It is clear that unemployment in the area would have been higher but for migration. At the same time, however, these tables suggest that there has been at times a tightness in the labour market, (and it must be remembered that the national labour market, with which we are comparing that of North East Lancashire, has itself generally been tight over this period). Whatever the reasons for this situation, the consequence of being able to obtain a local job fairly easily has been to reduce the incentive to travel to Central Lancashire to find work. This incentive has been much greater in the case of the residents of the Blackpool, Southport and Wigan areas, where the unemployment situation has been much worse.

J.16 It can be argued that a true assessment of the state of the labour market requires that information should also be available on the unsatisfied demand for labour. Unfortunately the only measure of unsatisfied demand that exists at present is the number of vacant jobs notified by employers to the Ministry of Labour. This measure is imperfect, since by no means all vacancies are notified. Nevertheless it is useful to look at the data as a supplement to the information on unemployment already presented.

J.17 We were able to break down the overall figures and to analyse the situation for certain broad groups of occupations, to see whether there might be any exceptions to this general picture. For ease of presentation we grouped the figures for the individual exchanges to give the following areas; Blackburn, Burnley, Rossendale, Preston, Blackpool, Southport and Wigan.

CRAFTSMEN

J.18 For most of the period vacancies exceeded unemployed in all areas with the single and significant exception of Blackpool, which for the entire period (of eleven quarters) had an excess of vacancies in only two quarters. The excess was less than 50 for Rossendale, Southport and Wigan, and between 50 and 150 for Preston, Burnley and Blackburn. For Central and North East Lancashire we were able to express the excess vacancies as a percentage of employment, and on this basis the excess was greater in all three areas of North East Lancashire than in Central Lancashire. In the latter part of the

TABLE J.4 UNEMPLOYMENT IN RELATION TO THE NATIONAL AVERAGE

	Number of years in which unemployment has been:		
	Greater than G.B.	Less than G.B.	Equal to G.B.
Preston	2	12	1
Leyland	-	15	-
Chorley	2	12	1
Bamber Bridge	-	14	1
Blackburn	6	7	2
Darwen	9	6	-
Great Harwood	5	10	-
Accrington	6	8	1
Haslingden	1	14	-
Padiham	7	7	1
Burnley	9	3	3
Clitheroe	-	15	-
Colne	9	5	1
Nelson	8	7	-
Rawtenstall	3	11	1
Bacup	9	5	1
Southport	15	-	-
Ormskirk	13	1	1
Blackpool	14	1	-
Lytham St. Anne's	12	2	1
Fleetwood	15	-	-
Wigan	15	-	-

TABLE J.5 PERCENTAGE UNEMPLOYED : MONTHLY AVERAGES

	1953	'54	'55	'56	'57	'58	'59	'60	'61	'62	'63	'64	'65	'66	'67
1	1.6	1.4	1.1	1.2	1.4	2.2	2.2	1.6	1.5	2.0	2.5	1.6	1.4	1.4	2.4
2	1.3	0.4	1.1	1.0	1.0	3.0	3.0	1.9	1.3	2.5	2.7	1.4	1.2	1.4	2.6
3	1.5	0.6	1.4	1.0	0.9	2.3	2.7	2.4	1.4	3.2	3.3	1.8	1.1	1.5	2.6
4	1.9	0.6	0.7	0.9	1.0	2.9	2.8	1.6	0.7	2.4	3.4	1.1	0.9	1.1	2.7
5	2.6	1.1	2.2	1.8	1.2	2.4	1.8	2.2	0.8	1.8	2.0	0.6	0.6	0.7	1.9
6	0.8	0.4	0.8	0.5	0.3	1.5	1.2	0.5	0.5	2.2	2.2	0.9	0.5	0.7	2.2
7	2.7	0.7	1.9	2.3	1.1	2.0	1.6	0.7	1.3	4.3	3.5	1.6	1.1	1.6	2.5
8	1.6	0.8	2.3	2.1	1.4	3.5	2.9	2.3	1.4	3.4	3.6	1.6	1.3	1.5	2.9
9	0.8	0.4	0.4	0.7	0.5	1.0	1.1	0.6	0.3	0.9	1.5	0.8	0.5	0.7	1.2
10	1.1	0.7	1.3	1.4	0.9	3.0	2.4	2.5	1.5	4.4	3.5	1.1	0.8	1.5	4.3
11	1.4	0.6	2.0	2.0	1.0	2.7	2.3	2.5	1.2	3.9	3.8	1.2	0.7	1.1	4.5
12	0.6	1.3	1.3	0.9	0.8	2.4	1.0	0.5	1.0	2.4	1.7	1.6	1.0	0.7	2.2
13	1.1	2.3	2.5	2.0	1.1	3.2	2.2	1.3	1.4	4.7	4.3	2.7	2.6	1.3	3.9

KEY TO TABLE J.5

1 = Great Britain
2 = Blackburn
3 = Darwen
4 = Accrington
5 = Great Harwood
6 = Haslingden
7 = Padiham
8 = Burnley
9 = Clitheroe
10 = Colne
11 = Nelson
12 = Rawtenstall
13 = Bacup

period the excess of vacancies began to diminish and by the third quarter of 1967 all areas were showing an excess of unemployed, with Blackpool being in the worst position, followed by Blackburn.

METAL USING INDUSTRIES : MALES

J.19 The pattern of change is here far more complicated than for craftsmen, but certain relationships emerge. First, Blackpool again had the slackest market showing an excess of unemployed throughout the period, the only area to do so, this excess being the greatest for all areas in all quarters but one. Second, Burnley had the tightest market, being the only area to register an excess of vacancies in every quarter and having the greatest excess of all areas for all but two quarters. Third, for the first part of the period, the relative positions of Blackburn and Preston constantly changed, although both had an excess of vacancies until the third quarter of 1966. After this date both areas swung into an excess of unemployed, with Blackburn having the higher figure, a situation that persisted until the end of the period.

TEXTILES : MALES

J.20 Up to the third quarter of 1966 the only two areas to have shown an excess of unemployed were Blackpool (seven quarters) and Southport (two quarters). At the other extreme, the largest excesses of vacancies were in Blackburn and Rossendale. After this date the situation worsened dramatically and by the second quarter of 1967 all areas had excess of unemployed, this being greatest in Burnley, followed by Blackburn.

TEXTILES : FEMALE

J.21 The situation has been generally similar to that for male textile workers, with at the beginning of the period Blackpool having the slackest and Blackburn the tightest labour market and by the end of the period following the reduction in output Burnley once more having the greatest excess of unemployed, followed again by Blackburn.

OFFICE WORKERS : MALE

J.22 The pattern here is the simplest of all the occupational groups, since there is not a single change in the relative positions of the six areas. Throughout the period the order remained, (tightest markets first): Rossendale, Wigan, Burnley, Blackburn, Preston, Southport and Blackpool.

OFFICE WORKERS : FEMALE

J.23 The pattern here is more confused, but, taking the period as a whole, the tightest markets were again in Wigan and Rossendale and the slackest in Blackpool and Southport.

REDEPLOYMENT OF REDUNDANT WORKERS

J.24 We have carried out a survey of the workers made redundant by the closure of the A.E.I. factory at Nelson. This survey is useful as an indication of the degree of pressure in the local labour market, and as such supplements our analysis of the unemployment vacancy ratios. The most obvious indication of the state of the labour market is the length of time taken by the redundant workers to find another job.

TABLE J.6 DURATION OF UNEMPLOYMENT

Males:	Nil	Up to 1 week	1 week 1 month	1-2 months	2-3 months	More than 3 months	Still un-employed	Total
Staff	14	2	8	3	1	1	4	33
Skilled Manual	20	4	-	-	1	-	1	26
Other Manual	4	1	3	3	2	1	12	26
Total Males	38	7	11	6	4	2	17	85
Females:								
Office	18	2	5	2	3	1	8	39
Manual	13	4	15	7	3	6	23	71
Total Females	31	6	20	9	6	7	31	110
Total	69	13	31	15	10	9	48	195
Percentage	35	7	16	8	5	5	24+	100

+ Of this figure all but 2% had been unemployed for at least three months at the time of the survey

(We exclude from the analysis those workers who accepted alternative employment with A.E.I.). The experience in this respect of the 193 workers who provided useful answers to this question is summarised in Table J.6.

J.25 It can be seen that there is a wide range of experience here, with over one third of the people going straight into another job, but with almost a quarter remaining unemployed after 3 months. Moreover there are obvious differences in the ease with which different categories of workers obtained new jobs. Some of these differences are explored below, but first we will try to put the general outline in perspective, by comparing it with the result of two previous surveys, by Hilda Kahn, into redundancies in the Midlands car industry, and by Dorothy Wedderburn after the closing of railway workshops at Gorton and Faverdale. Both Kahn and Wedderburn confined their enquiry to male manual workers, and we have done the same in Table J.7.

J.26 It is not possible to draw hard and fast conclusions from this data, since the figures could clearly be affected by the size of the redundancy and of the local labour market, (both relatively small in the case of A.E.I.) and also by such things as the redundancy pay given, the amount held as savings by the workers etc. However, the figures do suggest that relatively speaking there was a very ready market for the services of the majority of the A.E.I. workers. Redundant men were not absorbed as they might sometimes be in more prosperous parts of the country, - for example, the Ministry of Labour Gazette of February 1963 reports two instances in the London and South East Region where some 90% of workers were re-employed within six weeks but a higher proportion of workers went straight into new jobs than in the redundancies investigated by Kahn and Wedderburn.

J.27 At the other end of the scale the picture is not so clear, with the results for A.E.I. falling somewhere between those of Kahn and Wedderburn. However, the A.E.I. situation is clearly not a happy one, and it is interesting to note that of five redundancies analysed in the Ministry of Labour Gazette, the 'tail' after three months was, with one exception, below the Kahn figure of 6%. One reason given for the wide range of experience was the difference between different groups of workers. We shall consider the A.E.I. figures later, but it will be useful to look briefly once more at the data provided by Kahn and Wedderburn, to see the effect of two particular influences on the duration of employment, namely the degree of skill and the age of the redundant worker.

J.28 For the sake of conciseness, the two sets of figures are amalgamated in Table J.8. This very broad breakdown shows that while the chances of obtaining a new job quickly fall with increasing age, (especially over 50) there is no direct correlation with degree of skill. Semi-skilled workers found it rather easier to get new jobs than did skilled workers. On the other hand the unskilled worker found it more difficult than either. Again, from the Ministry of Labour studies, there emerged the picture of the old and the unskilled being the most difficult to place. We are unable to make a direct comparison with the above figures since we did not distinguish between semi-skilled and unskilled workers. Even

TABLE J.7 DURATION OF UNEMPLOYMENT

% Unemployed	Nil	Up to 1 wk.	1 wk.- 1 mth.	1-3 mths.	3 Months*	Total
A.E.I.	46	10	6	12	27	100
Kahn	23	21	28	22	6	100
Wedderburn	37	15		10	38	100

* Includes those still unemployed at the time of the survey.

TABLE J.8 DURATION OF UNEMPLOYMENT BY SKILL AND AGE.

	Skilled	Semi-skilled	Unskilled	Up to 40	41-50	51+	Total
% obtaining new job in: Up to 1 month	58	69	46	74	66	43	64
More than 1 month	42	31	54	26	34	57	36

so, it is possible to see that the experience of skilled workers was extremely favourable, even by comparison with other redundancies, with 92% having found alternative employment within a week, and only one man (=4%) remaining unemployed after three months. Other manual workers had a far less favourable experience, with only 19% having obtained alternative employment within a week, (31% within a month compared with a weighed average of 66% for Kahn and Wedderburn), and 46% remaining unemployed after three months.

J.29 The numbers involved here are not, of course, very great, but it does appear that the market for skilled men may be as tight in North East Lancashire as anywhere else in the country, but considerably slacker than average for other manual workers. This is supported by the experience of the female manual workers who are not, of course, fully skilled. Only 24% of this group found work within a week and despite the existence of non-industrial jobs virtually reserved for women, 32% remained unemployed after three months. Staff employees seem to fall between the two extremes. Taking males and females together, 50% found jobs within a week and 17% remained unemployed after three months.

J.30 In assessing the state of the labour market not only does one wish to know whether a worker has obtained another job, but also the characteristics of that job. Evidence on this point although limited, tends to strengthen the hypothesis advanced above. First, of 25 skilled workers only 2 (8%) moved to a non-skilled job, compared to 35% of the skilled workers in Wedderhurn's enquiry. Secondly, although more workers suffered financially than benefitted, the difference is very largely due to the experience of women who entered certain other industries. Of 15 women who entered the food, drink and tobacco industry or the distributive trades, 14 suffered losses in earnings. Moreover, it might well be that A.E.I. tended to pay above average wages so that a fall on changing jobs would be expected. The full figures are shown in Table J.9. Nor have people had to travel exceptional distances to find new jobs: of the 191 respondents living in Nelson 62% continued to work in the town and a further 34% in either Burnley or Colne. For the vast majority of this 96%, a journey to work of less than 5 miles would be involved. We recorded only 2% of people as having taken employment outside North East Lancashire although difficulties in forwarding mail to people who have moved their home could possibly make this an underestimate of the true position.

J.31 Finally, it is clear that the chances of re-employment are influenced by the age of the worker, the difficulties in finding a new job being particularly marked after the age of 55. (Table J.10). The extremely low percentage of women in this age-group to have found work, may of course, reflect the attitude of the worker as well as lack of opportunity. Previous studies have shown that following redundancy a relatively high proportion of women and especially older women, may simply leave the workforce to become full-time housewives. Although it is not possible, in this instance, to determine the relative importance of these two factors, it is clear that there are substantial impediments to the re-employment of redundant female employees, and this is particularly significant in view of the forecast trends of employment in the textile industry, which are discussed elsewhere in this report.

J.32 This study of redeployment of redundant workers has indicated that at the time of the closure of the factory, while the skilled workers found it easy to obtain another job, at roughly comparable earnings, and near at hand, the less skilled worker was less easily absorbed into the labour force. In particular, a substantial tail of workers remained unemployed after three months. This group contains a high proportion of older workers, mainly female or non-skilled male manual workers. How dependent are these findings on the economic circumstances which existed at the time? These circumstances would certainly have some influence (Table J.11)

J.33 Of the people made redundant in April/May over one half went straight into another job, compared with one fifth of those made redundant in later months. Those unemployed for at least three months, including those unemployed at the time of the survey, comprised one-fifth of the early leavers, and one-third of the later leavers. It is noticeable that the ratio of unemployment vacancies in all parts of North East Lancashire, and in virtually all industries, rose significantly between March and June and again between June and September, and it may be that this would be sufficient to explain the above figures. Alternatively it may be that the local labour market would in any event have been unable to absorb more than a given proportion of the redundant workers during the time covered by the survey. This latter possibility suggests that better transport facilities might have the effect of lessening the impact of any redundancy by enabling workers to look for alternative work over a wider area than is feasible at present. However, while a widening of the boundaries of the labour market would have this advantage, it seems likely that in this instance the more important factor influencing the pattern of

TABLE J.9 CHANGES IN EARNINGS BY OCCUPATION

Earnings :	Increased	Unchanged	Decreased	Total
Males:				
Staff	12	3	13	28
Skilled Manual	9	6	13	28
Other Manual	6	3	5	14
Total	27	12	31	70
Percentage	39%	17%	44%	100%
Females:				
Staff	14	4	12	30
Manual	13	5	30	48
Total	27	9	42	78
Percentage	35%	12%	54%	100%
Grand Total	54	21	73	148
Percentage	36%	14%	49%	100%

TABLE J.10 UNEMPLOYMENT AND AGE

	Age when declared redundant:-				
	15-20	21-30	31-40	41-55	56+
Percentage re-employed at time of survey					
Males	100	94	86	85	56
Females	93	79	75	63	15
Total	95	85	81	68	42

Total sample = 205

TABLE J.11 DURATION OF UNEMPLOYMENT BY MONTH OF REDUNDANCY

Redundant in:	Nil	1 week	1 month	1-2 months	2-3 months	3 months	Still Unemployed	Total
April-May	44	10	10	1	-	3	18	86
June-October	25	3	21	15	9	6	40	119

redundancy was the overall economic situation.

J.34 The importance of the overall situation has been demonstrated by other studies particularly that of Wedderhurn, while the findings of a second survey carried out by ourselves are consistent with this hypothesis. This survey was concerned with the redundancies which were announced towards the end of 1967 at British Northrop Ltd, Blackburn. The redundancies are of so recent a date as to preclude analysis in the same detail as for A.E.I. Nevertheless some interesting comparisons between the two events emerge. First the proportion of people finding jobs within one month, 51% is much nearer to that for A.E.I.'s "late leavers" (49%) than the early leavers (64%). Secondly, the degree of skill is of importance in determining how easy it is to find alternative work. Finally, age was once more found to be an important influencing ease of re-employment.

JOURNEY TO WORK

J.35 Our first requirement was to find out the length of journey to work which workers in North East Lancashire are normally prepared to undertake at present. The nature of the flows revealed by the Census suggests the average distance travelled to be relatively short and this was confirmed by our own enquiries. We obtained from employers in various parts of the area details of the residence of 11,124 workers. In the time available it was not, of course, possible for us to determine precisely the distance travelled by each worker, and it was decided to analyse the data in terms of Ministry of Labour employment exchange areas. This allows us to derive fairly easily an approximate measure of distance travelled and one which is easy to comprehend.

J.36 Of all the 11,124 workers, no fewer than 8,682 or 79% lived in the exchange areas in which they worked. All these workers undertook journeys to work of less than 5 miles, and for many, of course, the distance travelled would be considerably less than this. In addition, a further 1,394 workers, or 12% lived in the employment exchange area adjacent to the one in which they worked. In many instances this will again represent a journey of less than 4 or 5 miles, as for example for people travelling from Padiham to factories on the west side of Burnley. In total then, the proportion of workers undertaking journeys of less than 5 miles will certainly exceed 80% and is probably not far short of 90%.

J.37 This is, of course, an average figure for all categories of workers, and some categories exhibit patterns somewhat different from this average (Table J.12). Staff employees, and particularly senior staff, tend to undertake longer than average journeys to work. However, even here about 80% of journeys are of 5 miles or less. For skilled manual and manual supervisory (also largely skilled) categories, this percentage is similar, possibly slightly higher. Female employees, on the other band, and particularly female manual workers, tend to undertake shorter journeys, only about 3% travelling more than 5 miles.

J.38 Having established that the vast majority of workers undertake short journeys to work we now consider the question as to the direction of these journeys. Are there any important discernible flows between one part of the sub-region and another? In this context it would have been particularly interesting and useful had we been able to examine the effect on journeys to work of differentials in earnings. However, as was shown above, the differentials for the various occupations do not fall into a clear pattern. Moreover our sample is not sufficiently large as to justify trying to relate journeys to work to earnings for single occupations.

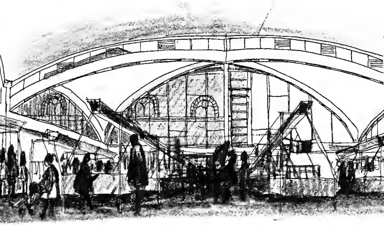
J.39 Certainly, to return to the overall flows as revealed by our enquiries, there do not appear to be any important net movements within the sub-region. This is illustrated in Table J.13. There is no evidence that the fall in general earnings from west to east has influenced overall residence-work relationships.

J.40 To summarise the present situation in North East Lancashire, we can say that the average journey to work is short, that no areas "import" or "export" significant numbers of workers each day, and that there is no readily discernible connection between earnings and journey to work.

J.41 We have been able to supplement our studies first, by an analysis of the distribution of residence of employees of the two major employers in Central Lancashire, the British Aircraft Corporation and Leyland Motors. The value of this analysis lies in the fact that the plants of the two companies are so distributed as to be able, in total, to draw upon workers who live in all parts of the area surrounding Central Lancashire, so that a comparative study is possible. Secondly, we have analysed the residence patterns of certain other firms which are located on the east side of Central Lancashire, and so may be expected to draw upon such workers as are willing to travel in from North East Lancashire.

B.A.C. ; LEYLAND MOTORS

J.42 It was possible to analyse the residences of a



The interior of the new market hall, Accrington.

TABLE J.12 RESIDENCE OF WORKERS BY CATEGORY AND EXCHANGE AREA,%-age LIVING AND WORKING IN:

Category	Same Exchange Area	Adjacent Exchange Area	Other Exchange Area	Total
Male Senior Staff	54	21	25	100(=465)
Other Male Clerical	66	20	14	100(=709)
Male Managers - Supervisory	71	17	13	100(=180)
Male Skilled Manual	71	13	16	100(=1062)
Female Staff	83	12	6	100(=756)
Female Manual	91	7	2	100(3176)

TABLE J.13 PERCENTAGE OF WORKERS LIVING AND WORKING IN CERTAIN EXCHANGE AREAS

Living in : Working in	Blackburn	Accrington	Burnley	Nelson
Blackburn	X	5	Negative	Negative
Accrington	4	X	3	"
Burnley	1	4	X	9
Nelson	Negative	Negative	10	X

Negative = less than ½%

substantial proportion of the manual workers at five factories, those at Warton, Preston and Samlesbury of B.A.C. and at Leyland (including Farrington) and Chorley of Leyland Motors. The total number of employees covered by the analysis was 4,594 and the results of the analysis are presented in Table J.14.

J.43 The Preston plant is virtually at the centre of the Central Lancashire area, and it is not surprising to find that a high number of workers (87%) live within the area. What is particularly significant, however, is that 10% of workers come from the Fylde areas, as compared to only 1% from North East Lancashire. (The percentages for skilled workers are 13 and 2 respectively). Some of the parts of the Fylde area are nearer to Preston than is Blackburn, but the majority of these workers come from Blackpool, which is seventeen miles from Preston, as compared to Blackburn's ten.

TABLE J.14 RESIDENCE OF EMPLOYERS IN FIVE ENGINEERING PLANTS IN CENTRAL LANCASHIRE

Percentage Living in:	Central Lancashire	North East Lancashire	Fylde	Elsewhere*	Total
Factory					
Preston:					
Skilled	80	2	13	5	100(=411)
Semi-skilled	89	-	10	1	100(=287)
Unskilled	100	-	-	-	100(=67)
Women	98	-	2	-	100(=127)
Total	87	1	10	2	100(=892)
Warton:					
Skilled	22	-	78	-	100(=186)
Semi-skilled	13	1	86	-	100(=105)
Unskilled	21	-	79	-	100(=29)
Women	38	-	57	5	100(=21)
Total	20	-	79	-	100(=341)
Samlesbury:					
Skilled	50	47	1	2	100(=144)
Semi-skilled	63	37	-	-	100(=152)
Unskilled	67	33	-	-	100(=33)
Women	70	30	-	-	100(=30)
Total	59	40	-	1	100(=359)
Leyland:					
Skilled	83	1	2	14	100(=578)
Semi-skilled	81	1	3	15	100(=1326)
Unskilled	84	1	2	13	100(=375)
Total	82	1	2	15	100(=2279)
Chorley:					
Skilled	65	2	1	32	100(=195)
Semi-skilled	92	1	-	8	100(=528)
Total	85	1	-	14	100(=723)

- = less than ½%

*Almost all of these workers live to the south of Central Lancashire in the area running from Bolton through Wigan to Southport.

Further Southport, also seventeen miles from Preston, although not as important a supplier as the Fylde, is more important than North East Lancashire.

J.44 The Leyland factory, although about five miles to the south of Preston, has a reasonably central location, and is again characterised by having a substantial number of workers (82%) living within Central Lancashire. The south of centre location has the effect of drawing in substantial numbers of workers - a total of 15% - from the arc which runs from Bolton in the south-east to Southport in the south-west. Neither the Fylde nor North East Lancashire is an important supplier of labour, although the Fylde remains the more important of the two, despite a distance relationship that is now even more unfavourable.

J.45 Although the Chorley factory is towards the southern fringe of Central Lancashire it is by far the most important engineering plant in Chorley and not surprisingly therefore, draws most of its workers from within Central Lancashire, a total of 85%, with all but 3% of these coming from Chorley. Of the areas outside Central Lancashire the Wigan-Bolton area is particularly important, especially for skilled labour - 20% of the skilled workers come from Wigan alone.

J.46 The Warton and Samlesbury factories are both in true "fringe" locations, in that they are at the edge of the Central Lancashire area and also, relatively speaking, some distance from highly populated areas. The numbers of workers coming from Central Lancashire is much lower, particularly for Warton, and the numbers coming from Fylde and North East Lancashire respectively, are correspondingly greater.

J.47 These figures also show, once more, that some categories of workers will tend to travel greater distances than will others. Skilled workers have a greater and female workers a less than average mobility.

J.48 The results of this analysis of the residence patterns of manual workers in these two companies, which are the largest industrial concerns in Central Lancashire, seemed to be fairly conclusive as regards the relative importance of North East Lancashire as a supplier of labour to Central Lancashire. However, we thought it worthwhile looking at certain other groups of workers to see if any important differences emerged. We first examined the residences of a sample of staff employees at the Leyland and Chorley plants of Leyland Motors Ltd. (Table J.15).

J.49 There are no striking differences here from the residence patterns of manual workers. The great majority of employees live within the Central Lancashire area and of the other areas, North East Lancashire is again relatively unimportant.

J.50 We next analysed the position at Courtaulds Ltd. whose factory is situated on the east side of Preston. Since it is easily accessible to some fairly densely populated parts of the town it cannot be said to be a "fringe factory" and indeed, 97% of its employees live within Central Lancashire. Nevertheless in view of the location one might have expected North East Lancashire to be the most important supplier of "outside" labour and for this reason alone the analysis is of interest. An additional fact of interest is that the work force has a very different mix of occupations from those of B.A.C. and Leyland Motors a preponderance of workers requiring relatively little training.

TABLE J.15 LEYLAND MOTORS : RESIDENCE OF STAFF EMPLOYEES

Staff Category	Employees Resident in: Central Lancashire	North East Lancashire	Fylde	Elsewhere	Total
Senior	153	6	10	15	184
Technical (e.g. Draughtsmen)	71	1	2	8	82
Manual Supervisory	44	-	1	5	50
Male Clerical	30	-	2	3	35
Female Clerical	32	-	1	-	33
Total	330	7	16	31	384
Percentage	86%	2%	4%	8%	100%

J.51 In fact, as can be seen from Table J.18 North East Lancashire remains less important as a supplier of labour than the Fylde with the total supply from all outside areas now being considerably less than in the case of B.A.C. and Leyland Motors.

J.52 We have not yet distinguished between those workers who have been with their employer for a short or a long period of time. Some people may take a job at a distance "on trial" with the intention of moving nearer to the job if it proves satisfactory. An analysis of the residence of employees on first entering a firm may therefore be appropriate to the impact study.

J.53 We were fortunate in being able to analyse the residence pattern of all manual workers who had joined B.A.C. since the beginning of 1965. The company increased its labour force considerably during this period, and we were able to record 2,514 addresses. The results of our analysis is presented in Table J.17. The residence patterns at the Preston factory are almost identical for our sample of all employees and for recent entrants. This factory accounts for about two-thirds of all recent entrants, and there is clearly no sign of an increasing tendency for a central location to pull in greater numbers from outside Central Lancashire.

J.54 "Outside" workers are more important in recent entrants than overall for the two "fringe" factories - the proportion of workers travelling from Fylde to Warton has increased from 79% to 86% and that from Blackburn to Samlesbury from 40% to 47%. This could indicate a slightly greater willingness than previously to travel to the fringes of Central Lancashire but the increases are not, of course, great. Moreover, redundancy accounts for about one sixth of these moves. Furthermore, quite a high proportion of these recent "outside" entrants have subsequently left B.A.C.'s employment - over a quarter of a sample of 265.

J.55 To summarise the situation with respect to journey to work of North East Lancashire residents to Central Lancashire, the flow to central locations of manual workers is extremely light. Central Lancashire mans well over 80% of the jobs in these factories and of the workers that do come in from outside, the Fylde, the Southport area and the Wigan-Bolton area, are all considerably more important suppliers, despite distances which on the whole are greater than from the nearer parts of North East Lancashire. For the Samlesbury factory the picture is quite different with 40% of workers coming from North East Lancashire. Samlesbury is 7 miles from Blackburn and given that the majority of the North

TABLE J.16 COURTAULDS LTD. : RESIDENCE OF EMPLOYEES

Staff Category	Numbers of Employees Living in: Central Lancashire	North East Lancashire	Fylde	Elsewhere	Total
Males:					
Senior Staff	57	-	2	-	59
Supervisors	155	-	1	1	157
Clerical Staff	56	1	-	-	57
Skilled Manual	268	2	4	2	276
Other Manual	2368	19	59	12	2458
Females:					
Staff	88	2	-	-	70
Manual	495	3	3	-	501
Total	3467	27	69	15	3578
Percentage	97	1	2	-	100

East Lancashire workers actually come from the west side of Blackburn, including that part of Blackburn rural district, this means that many of these workers will have a journey of about 5 miles. An analysis of recent entrants to B. A. C. shows no evidence of a significant shift in the relative importance as a supplier of labour either of Central Lancashire vis-a-vis the surrounding area or of one part of this area vis-a-vis another.

J.56 Finally it should be stressed that we have not tried to measure net flows between North East and Central Lancashire. To have done so in the time available would have required the co-operation of a B. A. C. or a Leyland Motors in Blackburn and no such firm exists of course However, we were able to analyse the records of a paper-manufacturing firm which is situated to the west of Blackburn (see Table J.18).

SURVEY OF RECENT ENTRANTS

J.57 Reference has already been made to the survey that was undertaken of recent entrants to B. A. C. (and also to Leyland Motors). In addition to undertaking an analysis of residence we sent a brief questionnaire to a sample of workers living outside Central Lancashire to try to discover their main

TABLE J.18 PERCENTAGE OF WORKERS LIVING IN CENTRAL LANCASHIRE

Male Staff	14
Skilled Manual Workers	19
Other male workers	25
Female Staff	14
Other female workers	19
Total	18 (=129)

TABLE J.17 B. A. C. RESIDENCE OF RECENT ENTRANTS

Factory	Percentage living in: Central Lancashire	North East Lancashire	Fylde	Elsewhere	Total
Preston:					
Skilled	81	3	11	5	100(=440)
Semi-skilled	83	-	15	2	100(=706)
Unskilled	95	1	4	-	100(=146)
Women	97	1	2	-	100(=364)
Total	87	1	10	2	100(=1656)
Warton:					
Skilled	9	3	88	-	100(=130)
Semi-skilled	10	-	89	1	100(=182)
Unskilled	24	-	76	-	100(=34)
Women	21	-	79	-	100(=84)
Total	13	1	86	-	100(=430)
Samlesbury :					
Skilled	38	62	-	-	100(=112)
Semi-skilled	51	48	1	1	100(=182)
Unskilled	75	25	-	-	100(=61)
Women	74	26	-	-	100(=73)
Total	53	47	-	-	100(=428)

TABLE J.19 REASONS FOR TAKING UP EMPLOYMENT IN CENTRAL LANCASHIRE

Reason	Percentage of Workers Resident in: North East Lancashire	Fylde	Elsewhere	Total
Redundancy	38	9	5	16
Better earnings/Conditions	54	82	74	73
Others	8	9	21	11
Total	100(=26)	100(=54)	100(=19)	100(=99)

reasons for changing jobs. Redundancy accounted for about one sixth of a sample of 90 moves, but it is interesting to note that it was more important for North East Lancashire residents than for residents of other areas. (Table J.19) The numbers involved in this sample are, of course, small, but it does suggest that higher earnings and better conditions (of which earnings is by far the more important factor), may be a less important attraction factor for residents of North East Lancashire than for those of other areas. This hypothesis is supported by data (Table J.20) on the changes in the earnings of those whose primary motive for changing jobs was higher earnings.

TABLE J.20 AVERAGE CHANGE IN WEEKLY EARNINGS AND HOURS WORKED

Previous job in:		Change in earnings	Hours
North East Lancs.	A	+ 97/6	+3.8
Other Areas	A	+102/-	+1.3
North East Lancs.	B	+111/4	+3.8
Other Areas	B	+113/-	+1.2

A Where new occupation is the same as previously
B Where new occupation is different from previous.

J.58 The actual average differentials are very similar, but to obtain the increase in earnings, the people who previously worked in North East Lancashire had to increase their working week by a greater amount than did other workers. If one costs the extra hours worked at 10/- per hour, the North East Lancashire workers can be said to have benefited less than other workers by almost 30/- per week. Since these differentials, even when corrected, are considerably greater than we suggested earlier, it should be emphasised that these figures relate only to those workers whose primary motive for changing employment was to achieve higher earnings. The differential for those workers who moved for other reasons is much smaller, averaging about 10/- per week (corrected) for North East Lancashire.

JOURNEY TO WORK MODELS

J.59 In addition to the studies already described we attempted, in conjunction with the Ministry of Transport, to construct a commuting model which would explain and predict subregional commuting patterns in North East and Central Lancashire. A considerable volume of data on the many factors involved was required to develop and calibrate the model. Since the Census of 1961 provides the largest volume of recent, comprehensive data on a wide range of factors that year was chosen as the base year. Data on 1961 levels of population, journey to work flows, employment structure, economically active population, migration rates, household size distribution, socio-economic group distribution, retail turnover, rateable values and construction rates were prepared for 142 local authority areas in the North West Region. These authorities included those of North East Lancashire and Central Lancashire together with the two main conurbations. Where appropriate, similar data was collected on certain areas in the West Riding of Yorkshire. Wherever possible, for data on population or employment, figures were prepared separately for males and females.

J.60 The distances between each local authority and every other area under examination were estimated in terms of "airline distance", i.e. the shortest distance between the two points, and "time distance", in this case taken as an estimate of the shortest time taken to travel by road between the two points. As an additional exercise, more detailed information was prepared for a limited number of areas in an attempt to describe the quality of local job opportunities in quantitative terms and to relate this information to the work flows which occurred. Examples of such factors are:-

a) the presence of better paid employment in neighbouring areas

b) the absence of suitable work in the worker's area of residence.

J.61 A general assumption underlying this approach has been that growth industry pays higher wages than declining industry, particularly where the growth industry creates a strong demand for labour. As suitable data on wages in the areas under consideration were not available for a sufficient number of local authorities the calculation of wage differentials between points experiencing commuting flows was not practicable. Instead, figures on the relative growth and decline of certain industries in each area were calculated. The local growth indices also provide an indication of the creation of additional job opportunities in the local labour market in the short term; this again, could prove of importance to the analysis of commuting flows.

J.62 We took the level of unemployment in originating areas as a factor in determining journey to work flows. This was calculated for both males and females and for those wholly unemployed and temporarily stopped since conditions for movement may be different for each group. Because of the possibility of a lag effect, information on unemployment levels prevailing for some months before the census date were gathered for each of the 142 areas. The following additional data was therefore prepared:

a) Local employment change indices 1959-61
b) Local total employment change 1959-61
c) Regional employment change indices 1959-62
d) National employment change indices 1959-62
e) Unemployment, males and females, wholly unemployed and temporarily stopped. April 1961 to June 1961.

J.63 This data was applied to the model in two stages. Firstly, multiple linear correlations were carried out between all the above parameters and the actual flows taking place, in order to obtain predictive equations for the total volume of journey to work movement from each locality.

J.64 These correlations have shown that for a given town "A"

$$I_A = \alpha_1 + \beta_1 E_A + \gamma_1 D_A + \partial_1 (E_A - J_A) \quad\text{\_\_\_\_\_\_ } 1$$

and

$$O_A = \alpha_2 + \beta_2 E_A + \gamma_2 D_A + \partial_2 (E_A - J_A) \quad\text{\_\_\_\_\_\_ } 2$$

where

I_A = commuting flow into A
O_A = commuting flow out of A
E_A = economically active population of A
D_A = population density of A
J_A = number of jobs in A
$\alpha_1 \alpha_2 \beta_1 \beta_2 \gamma_1 \gamma_2 \partial_1 \partial_2$ = constants

J.65 The analysis also showed that some of the constants vary depending on the type of area being considered (see para. J.60). The final term $-\partial_1 (E_A - J_A)$ is still under investigation as its presence represents the main dynamic element in the equations, having possible connections with such terms as unemployment or the rate of growth of job opportunities.

J.66 The next stage of the work, which is still in progress, is the development of a work journey distribution model, which will allocate the projected commuting inflows and outflows to specific origins and destinations. This will be followed by prediction of the relevant socio-economic parameters to forecast the overall future pattern of flows. Three types of gravity trip distribution models are currently being tested:

a) The simple model, where:

$$t_{ij} = k \left(\frac{Oi}{dij} \frac{Ij}{B} \right) \quad\text{\_\_\_\_\_\_\_\_ } 3$$

where

t_{ij} = Number of trips from (i) to (j)
k = constant
B = constant
d_{ij} = distance between (i) and (j)

b) Alternatively, allowing for the simultaneous competition of all zones (a-k) for trips out of i and trips into j

$$t_{ij} = kO_i \left[\frac{I_j}{d_{ij}\, B. \sum_{a}^{k} \frac{I_k}{d_{ik} B}} \right] \quad\text{\_\_\_\_\_\_ } 3a$$

(This is, of course, the basic form of the model used for shopping predictions).

c) As well as inverse relationships with distance, the system can similarly be tested for exponential relationships e.g.

$$t_{ij} = kO_iI_je^{-\lambda d_{ij}} \qquad 4$$

or

$$t_{ij} = kO_iI_je^{-\lambda d_{ij}} \Big/ \sum_{a}^{k} e^{-\lambda d_{ik}}$$

J.67 Forecasts of certain of the basic sets of information have already been prepared. These are:

a) revised "time distance" estimates, computed under the influence of new road construction and improvement prospects for the North West Region.

b) population of all local authorities in the North West Region has been estimated on the basis of known new town, town expansion and overspill schemes and taking account of other known development possibilities .

J.68 Although the journey to work model described here has not provided usable results for the present study, its eventual completion could help in providing a basis for assessing the future communications requirements of North East Lancashire.

Appendix K

Industrial selection scheme

K.1 The Industrial Selection Scheme which operates at present by arrangement between the authorities of the new and expanding towns around London, the Ministry of Housing and Local Government, the Ministry of Labour, and the G.L.C., might be worth describing since there might be some possibility of a similar scheme being applied to the development of the Central Lancashire New Town. Broadly, the scheme matches up suitably qualified workers resident in the Greater London Area, who have registered a desire to move to a new or expanding town, with employment vacancies as they arise. All such workers are registered on a G.L.C. index, and may be London local authority tenants, people on London Borough Housing waiting lists, or other direct registrants. Each registrant is coded according to job category, qualifications, geographical preference, minimum wage requirement and degree of housing need (4 categories).

K.2 Job vacancies arising in receiving areas are notified by employers to local employment exchange managers and fed back to the G.L.C. via the Ministry of Labour Regional Office. The initial procedure varies according to the nature of the vacancy, ranging from unskilled jobs for which only registrants on the G.L.C. index can be nominated, to skilled and certain semi-skilled jobs for which the London local employment exchanges are also notified, and can submit workers who are unemployed or on their local I.S.S. register in suitable job categories. This variation in procedure is a reflection of the difficulty of obtaining skilled workers who are willing to move, and this is aggravated in the case of London since skilled workers are likely to be receiving above-average earnings, and are unlikely to be in severe housing need. If neither the I.S.S. index or the local exchanges succeeds in filling the vacancy, the local exchanges may then invite applications from people registered with them who wish to change their type of employment to that of the vacancy, while as a last resort employers may be encouraged to advertise the vacancy in London. Only when these alternatives are unsuccessful does the employer seek to fill the vacancy from outside London, and as he is normally able to offer potential employees housing accommodation, there is some tendency for these employees to be those with severe housing needs.

K.3 The procedure outlined above is usually followed by employers, since they are dependent for their housing allocations upon Housing Managers who in turn have every incentive to take people from London because of the various payments and subsidies towards the cost of housing that they thereby receive. In some towns employers may be required to pay some form of compensation for the housing of employees from outside the London Area. The proportion of total moves to new and expanding towns accounted for by I.S.S. is low, although it has improved substantially in recent years, its main failure stemming from the difficulty of attracting skilled workers from London, and the fact that such workers are not normally in severe housing need, the category to which the new towns made their greatest appeal and to whom overall priority is given.

Towneley Hall and Park in Burnley

Appendix L

Authorities consulted

Accrington MB
Accrington and Church Outfall Sewerage Board

Bacup MB
Barrowford UD
Blackburn CB
Blackburn RD
Board of Trade
Brierfield UD
British Rail
Bolton CBC Water Board
Burnley CB
Burnley RD

Calder Water Board
Central Electricity Generating Board
Church UD
Clayton-le-Moors UD
Clayton-le-Moors and Great Harwood Joint Sewerage Board
Clitheroe MB
Clitheroe RD
Colne MB

Darwen MB
Department of Economic Affairs

Fylde Water Board

Great Harwood UD

Haslingden MB
Haslingden, Rawtenstall and Bacup Outfall Sewerage Board

Inland Revenue (Mineral Valuation Section)

Lancashire County Council
Lancashire and Merseyside Industrial Development Association
Lancashire River Authority

Mersey and Weaver River Authority
Meterological Office
Ministry of Agriculture, Fisheries and Food
Ministry of Housing and Local Government
Ministry of Labour
Ministry of Technology (Warren Springs Laboratory, Stevenage)
Ministry of Transport

National Coal Board
Nelson MB
North Calder Water Board
North West Economic Planning Council
North Western Electricity Board
North Western Gas Board
Northampton CB
Northamptonshire County Council

Oswaldtwistle UD

Padiham UD

Rawtenstall MB
Rishton UD

Trawden UD

Withnell UD

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